

**BOTANICAL BIOLOGICAL ASSESSMENT,  
BOTANICAL BIOLOGICAL EVALUATION,  
BOTANY REPORT  
and  
NON-NATIVE SPECIES (WILDLIFE AND PLANT) RISK ASSESSMENT  
for  
SOUTHERN CALIFORNIA NATIONAL FORESTS  
LAND MANAGEMENT PLAN AMENDMENT  
~DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT~**



Camatta Canyon Amole  
(*Chlorogalum purpureum* var. *reductum*)  
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San Bernardino Bluegrass  
(*Poa atropurpurea*)  
T. Stoughton

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## SUMMARY

This report addresses the potential effects of botanical resources that are known or likely to occur in the areas affected by the proposed action. It also includes the plant and animal nonnative species risk assessment.

The Forest Service proposes to amend the 2006 Land Management Plans (LMPs) in a limited in scope that is designed to address the terms of a settlement agreement. This action is needed to respond to the terms of the Settlement Agreement between the Forest Service, State of California, and other settlement parties.

The proposed action is to modify the existing land use zones in thirty-five Inventoried Roadless Areas (IRAs) to include more Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW) areas on the Angeles, Cleveland, Los Padres, and San Bernardino National Forests. The analysis addresses two alternatives (Alternatives 2 and 3) amend LMP land use zone allocations for thirty-five IRAs in addition to taking no action (Alternative 1). Additionally, the analysis addresses two alternatives (Alternatives B and C) to amend LMP monitoring and evaluation protocols, in addition to making no changes (Alternative A).

The biological reports in the Project Record for the Final EIS for the LMP (USDA Forest Service 2006) provide the basis for this evaluation and they are incorporated here by reference. The analyses in those 2006 biological reports relative to the effects expected to botanical resources from the selected alternative are the same as Alternative 1 (No Action) for this proposal.

### Federally-Listed Species and Critical Habitat and Forest Service Sensitive Species

**Table 1** displays the Threatened and Endangered species, designated Critical Habitat, Forest Service Sensitive species and other rare plants known to occur within one or more of the affected IRAs.

There are two federally-listed species with known occurrences or designated Critical Habitat in the affected IRAs. *Poa atropurpurea* has known occurrences and designated Critical Habitat in the Barker Valley IRA on the CNF. *Chlorogalum purpureum* var. *reductum* has designated Critical Habitat but no occurrences in the Black Mountain IRA on the LPNF. Section 7 Endangered Species Act (ESA) compliance for T/E plants and Critical Habitat will be achieved through Informal Consultation under Section 7 of the ESA.

### Other Rare Species

Several other rare species were documented, including some that are proposed for addition to the Regional Forester's Sensitive species list as well as some that local botanists have a concern about viability.

### Potential Effects from Land Use Zone Changes

The effects to botanical resources including rare species from Alternative 1 (No Action) are the same as those described in the FEIS for the LMP (USDA Forest Service 2006) for the selected alternative.

Alternatives 2 or 3 may result in fewer activities and actions that could affect T/E plants or the Primary Constituent Elements for designated Critical Habitat. The effects from Alternatives 2 or 3 to these two T/E plants and their Critical Habitat may be beneficial.

If effects are occurring to Sensitive plant occurrences, they may be reduced under Alternatives 2 or 3 due to the fact that fewer activities and actions would be suitable in some of the LUZs. The effects from Alternatives 2 or 3 may be beneficial for almost all of the Sensitive species.

If effects are occurring to the other rare species, Alternatives 2 and 3 may help reduce effects by reducing the activities and actions that are suitable in those LUZs.

**Table 1** displays the “determinations of effects” for each species under Alternatives 2 and 3.

#### Non-Native Species – Risk Assessment Summary

The management of non-native plants and animals (e.g., survey, mapping, control and eradication) is not expected to be negatively affected by changes in Land Use Zones. Alternative 2 may result in a lowered risk and Alternative 3 may result in the lowest risk of introduction, establishment, and spread of non-native species.

#### Potential Effects From Monitoring Alternatives On Threatened, Endangered, Sensitive Species, other Rare Species, General Botanical Resources And Non-Native Species

Changing the monitoring methodology, in itself, is not expected to result in effects to botanical resources (including Sensitive, Threatened, Endangered, other rare plants, general botanical resources, and Critical Habitat) or non-native species management.

#### Viability

None of the alternatives would be expected to interfere with the long-term viability of any rare or common species.

#### Summary of Determinations of Effects for Alternatives

**Table 1** provides a summary of the “determinations of effects” for species known to occur in the IRAs. Other sections of this document display all of the species considered in this evaluation.

<b>Table 1. Summary of Effects Determinations for TES Species In the Analysis Area</b>		
<b>Common Name</b>	<b>Occurrence Information</b>	<b>Determinations for Alternative 2 and 3 <sup>1</sup></b>
<b>Threatened &amp; Endangered Plants</b>		
<i>Chlorogalum purpureum</i> var. <i>reductum</i> (T)	Black Mountain IRA (LPNF) – Critical Habitat only	NE for species; NLAA for CH
<i>Poa atropurpurea</i> (E)	Barker Valley IRA (CNF) – occurrence and Critical Habitat	NLAA for species; NLAA for CH
<b>Forest Service Sensitive Plants</b>		
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Allium howellii</i> var. <i>clokeyi</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Arctostaphylos pilosula</i>	Black Mountain (LPNF), Machesna Mountain (LPNF)	NI/BI

Table 1. Summary of Effects Determinations for TES Species In the Analysis Area		
Common Name	Occurrence Information	Determinations for Alternative 2 and 3 <sup>1</sup>
<i>Arctostaphylos refugioensis</i>	Tequepis (LPNF)	NI/BI
<i>Arenaria lanuginosa ssp. saxosa</i>	Raywood Flat B (SBNF)	NI/BI
<i>Astragalus bicristatus</i>	Cactus Springs B (SBNF)	NI/BI
<i>Astragalus deanii</i>	Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, Upper San Diego River (CNF)	NI/MAI
<i>Astragalus oocarpus</i>	Barker Valley, Eagle Peak (CNF)	NI/BI
<i>Boechera johnstonii</i>	Pyramid Peak A (SBNF)	NI/BI
<i>Botrychium crenulatum</i>	Raywood Flat B (SBNF)	NI/BI
<i>Brodiaea orcuttii</i>	Barker Valley, Sill Hill (CNF)	NI/BI
<i>Calochortus clavatus ssp. clavatus</i> <sup>2</sup>	Fish Canyon (ANF), Red Mountain (ANF), Salt Creek (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI <sup>2</sup>
<i>Calochortus clavatus ssp. gracilis</i>	Fish Canyon (ANF), Red Mountain (ANF), Salt Creek (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI
<i>Calochortus dunnii</i>	Sill Hill (CNF)	NI/BI
<i>Calochortus palmeri</i> var. <i>munzii</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Garcia Mountain (LPNF), Machesna Mountain (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Calochortus plummerae</i> <sup>3</sup>	Raywood Flat B (SBNF), West Fork (ANF), Westfork (ANF)	NI/BI <sup>3</sup>
<i>Calochortus simulans</i>	Garcia Mountain (LPNF), Machesna Mountain (LPNF), Spoor Canyon (LPNF)	NI/BI
<i>Calochortus weedii</i> var. <i>intermedius</i>	Coldwater, Ladd (CNF)	NI/BI
<i>Calochortus weedii</i> var. <i>vestus</i>	Dry Lakes (LPNF), Sespe – Frazier (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI
<i>Calycadenia villosa</i>	Black Mountain (LPNF)	NI/BI
<i>Castilleja gleasonii</i>	Fish Creek (ANF)	NI/BI
<i>Castilleja lasiorhyncha</i>	Raywood Flat B (SBNF)	NI/BI
<i>Caulanthus simulans</i>	Barker Valley (CNF),	NI/BI
<i>Chorizanthe blakleyi</i>	Fox Mountain (LPNF), Spoor Canyon (LPNF)	NI/BI
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Coldwater (CNF)	NI/BI
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> <sup>3</sup>	Barker Valley (CNF)	NI/BI <sup>3</sup>
<i>Chorizanthe rectispina</i>	Black Mountain (LPNF)	NI/BI
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> <sup>2</sup>	Cactus Springs B (SBNF)	NI/BI <sup>2</sup>
<i>Clarkia delicata</i> <sup>3</sup>	Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, Upper San Diego River (CNF)	NI/BI <sup>3</sup>
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	Sill Hill (CNF)	NI/BI
<i>Delphinium umbraulorum</i>	Diablo (LPNF), Fox Mountain (LPNF), Garcia Mountain (LPNF), Machesna	NI/BI

Table 1. Summary of Effects Determinations for TES Species In the Analysis Area		
Common Name	Occurrence Information	Determinations for Alternative 2 and 3 <sup>1</sup>
	Mountain (LPNF), Sespe – Frazier (LPNF), Spoor Canyon (LPNF), Tequepis (LPNF), White Ledge (LPNF)	
<i>Dieteria canescens</i> var. <i>ziegleri</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Draba corrugata</i> var. <i>saxosa</i>	Cactus Springs B (SBNF)	NI/BI
<i>Dudleya viscida</i>	Trabuco (CNF)	NI/BI
<i>Eriastrum luteum</i>	Black Mountain (LPNF)	NI/BI
<i>Eriophyllum lanatum</i> var. <i>hallii</i>	Fox Mountain (LPNF)	NI/BI
<i>Fritillaria ojaiensis</i>	Sespe – Frazier (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	Cactus Springs B (SBNF)	NI/BI
<i>Gilia leptantha</i> ssp. <i>leptantha</i>	Raywood Flat B (SBNF)	NI/BI
<i>Hesperocyparis stephensonii</i>	Sill Hill (CNF), Upper San Diego River (CNF)	NI/BI
<i>Heuchera hirsutissima</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Heuchera parishii</i>	Raywood Flat B (SBNF)	NI/BI
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	Trabuco (CNF)	NI/BI
<i>Horkelia truncate</i>	Ladd (CNF)	NI/BI
<i>Imperata brevifolia</i>	Antimony (LPNF), Dry Lakes (LPNF), West Fork (ANF), Westfork (ANF)	NI/BI
<i>Layia heterotricha</i>	Antimony (LPNF), Fox Mountain (LPNF), Quatal (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Lepechinia cardiophylla</i>	Coldwater (CNF), Ladd (CNF), Trabuco (CNF)	NI/BI
<i>Lepechinia fragrans</i>	West Fork (ANF), Westfork (ANF)	NI/BI
<i>Lepechinia rossii</i> <sup>2</sup>	Red Mountain, Tule (ANF)	NI/BI <sup>2</sup>
<i>Lilium parryi</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF), Raywood Flat B (SBNF), West Fork (ANF),	NI/BI
<i>Limnanthes alba</i> var. <i>parishii</i>	Barker Valley (CNF)	NI/BI
<i>Linanthus orcuttii</i>	Caliente (CNF)	NI/BI
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Mudulce (LPNF)	NI/BI
<i>Monardella australis</i> ssp. <i>jokerstii</i> <sup>2</sup>	Cucamonga B (SBNF)	NI/BI <sup>2</sup>
<i>Monardella linoides</i> ssp. <i>oblonga</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Barker Valley (CNF), Caliente (CNF), Coldwater (CNF)	NI/BI
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	Barker Valley (CNF)	NI/BI
<i>Navarretia peninsularis</i>	Sawmill – Badlands (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Nolina cismontana</i>	Trabuco (CNF)	NI/BI
<i>Opuntia basilaris</i> ssp. <i>brachyclada</i>	Fish Canyon (ANF), Red Mountain (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI
<i>Parnassia cirrata</i> var. <i>cirrata</i>	Raywood Flat B (SBNF)	NI/BI

<b>Table 1. Summary of Effects Determinations for TES Species In the Analysis Area</b>		
<b>Common Name</b>	<b>Occurrence Information</b>	<b>Determinations for Alternative 2 and 3 <sup>1</sup></b>
<i>Penstemon californicus</i>	Pyramid Peak A (SBNF)	NI/BI
<i>Phacelia excilis</i> <sup>3</sup>	Sespe – Frazier (LPNF)	NI/BI <sup>3</sup>
<i>Phacelia keckii</i>	Coldwater (CNF), Ladd (CNF), Trabuco (CNF)	NI/BI
<i>Saltugilia latimeri</i>	Cactus Springs B (SBNF)	NI/BI
<i>Satureja chandleri</i>	Trabuco (CNF)	NI/BI
<i>Sedum niveum</i>	Cactus Springs B (SBNF)	NI/BI
<i>Sidalcea hickmanii</i> ssp. <i>parishi</i>	Fox Mountain (LPNF), Machesna Mountain (LPNF), Spoor Canyon (LPNF), Raywood Flat B (SBNF)	NI/BI
<i>Sidothea emarginata</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Streptanthus bernardinus</i> <sup>3</sup>	Cucamonga B (SBNF)	NI/BI <sup>3</sup>
<i>Streptanthus campestris</i>	White Ledge (LPNF), Cactus Springs B (SBNF)	NI/BI
<i>Tetracoccus dioicus</i>	Trabuco (CNF)	NI/BI
<i>Thermoposis californica</i> var. <i>semota</i>	Sill Hill (CNF), Upper San Diego River (CNF), Tequepis (LPNF)	NI/BI
<b>Other Rare Plants</b>		
<i>Boykinia rotundifolia</i>	Cucamonga B (SBNF)	NVT
<i>Chaenactis parishii</i>	Cactus Springs B (SBNF)	NVT
<i>Hulsea vestita</i> ssp. <i>callicarpa</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF), Pyramid Peak A (SBNF)	NVT
<i>Juglans californica</i>	Westfork (ANF)	NVT
<i>Lilium humboldtii</i> var. <i>ocellatum</i>	Cucamonga B (SBNF)	NVT
<i>Polygala cornuta</i> var. <i>fishiae</i>	Trabuco (CNF)	NVT
<i>Washingtonia filifera</i>	Pyramid Peak A (SBNF)	NVT
<sup>1</sup> Determination Codes <b>Threatened/Endangered Species:</b> NLAA = May affect, not likely to adversely affect NE=No effect. <b>Sensitive Species:</b> MAI = May affect individuals but not likely to lead to a trend to Federal listing for Sensitive species. NI/BI =No impact and potentially beneficial impacts NVT=No threat to viability <sup>2</sup> Species that has been proposed for addition to the Regional Forester's Sensitive species list in 2012. Being evaluated as a Sensitive species in this evaluation. <sup>3</sup> Currently a Sensitive species but being proposed for removal from the Sensitive species list.		

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Acronyms and Abbreviations Used (optional)	
BA	Biological Assessment for species and habitats designated under the Endangered Species Act
BE	Biological Evaluation for Forest Service Sensitive species
BMP	Best management practices
BO	Biological Opinion rendered by U.S. Fish and Wildlife Service
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
E	Endangered species (listed under the Endangered Species Act)
EIS	Environmental impact statement
FSH	Forest service handbook
FSM	Forest service manual
GIS	Geographic information system
GPS	Global positioning system
IRA	Inventoried Roadless Area
LMP	Forest Land Management Plan (2006)
LUZ	Land Use Zone
NFS	National Forest System
NRCS	Natural Resource Conservation Service
NRIS	Natural Resource Inventory System
P	Proposed – species proposed for listing under the Endangered Species Act
RACR	Roadless Area Conservation Rule
RCA	Riparian conservation area
S	Forest Service Sensitive species
SBNF	San Bernardino National Forest
T	Threatened species (listed under the Endangered Species Act)
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WHR	California Department of Fish and Game's Wildlife Habitat Relationships Program ( <a href="http://www.dfg.ca.gov/whdab/cwhr/whrintro.html">http://www.dfg.ca.gov/whdab/cwhr/whrintro.html</a> )
Land Use Zones	
BC	Back Country
BCNM	Back Country Non-Motorized
BCMUR	Back Country Motorized Use Restricted
CB	Critical Biological
DAI	Developed Area Interface
EW	Existing Wilderness
RW	Recommended Wilderness

## PART I: INTRODUCTION

This document has five parts:

- Part I is an introduction with the project description, methods, and management direction.
- Part II is a Botany Report that describes the existing environment in the project area and also documents the general potential impacts to plant species and vegetation communities in the project area. Subsequent sections of this document may refer to the general effects discussion in Part II.
- Part III is a Biological Evaluation (BE) of potential impacts to species that are on the Regional Forester's Sensitive (S) species list.
- Part IV is a Biological Assessment (BA) of potential impacts to federally-listed Threatened (T), Endangered (E), Proposed (P), and Candidate (C) plant species and Critical Habitat.
- Part V is a Non-Native Plant and Animal Risk Assessment.

These reports are required for all Forest Service funded, executed, authorized, or permitted programs and activities.

### I-1.0 – METHODS

Species Considered and Species Accounts: Each chapter of this report contains the current list of special status species being considered in the analysis of potential effects. Only those species with known occurrences or considered to have a high likelihood of occurrence in the project areas are discussed in depth in this analysis. Scientific nomenclature and common names for species referred to in this report follow those used in the LMP (USDA Forest Service 2006), with updated nomenclature.

Detailed baseline/existing conditions discussions for plant species and vegetation communities can also be found in the Wilderness Evaluations (Appendix 2 of DEIS) that were prepared for each of the 37 IRAs. These documents were updated with the most current information after the public scoping period (May 2012).

Detailed species accounts and viability assessments for each of the Threatened, Endangered, Sensitive, and other plant species of concern were prepared during the 2006 revision of the LMP (USDA Forest Service 2006). Some of the accounts have been updated by individual forests during the 2012 Sensitive species list revisions. These species accounts include information on current status of populations and habitat, natural history, risks, conservation considerations, and viability analyses. These species accounts are incorporated by reference.

Occurrence Information: While comprehensive botanical surveys for plant species at risk and general botanical resources have not been conducted on all acreage within the 37 Inventoried Roadless Areas, some areas have been surveyed and data collected. For the IRA analysis, information on occurrences of plant species and Critical Habitat contained in the IRAs were

derived from Forest Service (NRIS, GIS) and other databases (USWFS, CNDDDB, etc.) in August 2012. These data are the most accurate readily available at the time this document was prepared.

Geographical Information Systems (GIS) data were gathered from the US Fish and Wildlife Service's Critical Habitat portal (<http://criticalhabitat.fws.gov/>), and Forest Service's Natural Resource Manager – NRM-TESP which included Threatened and Endangered plant species locations. For Forest Service Region 5 Sensitive plant species, the quality and quantity of GIS data in the NRM-TESP database varied by Forest. For example, in some locations Sensitive plant species location data had not yet been entered into NRIS resulting in zero acres shown for these plants within an IRA. To ensure all information sources were utilized, Forest Service Sensitive plant information that had been incorporated into the 37 wilderness evaluations by the Forest botanists in 2012 was considered. In addition, botanists from all four Forests provided input and review of this analysis.

### **I-2.0 – CURRENT MANAGEMENT DIRECTION**

Applicable requirements and direction may be found in the LMP, Endangered Species Act, National Forest Management Act, Department of Agriculture 9500-4 Regulations, Forest Service Manual, and the Southern California Conservation Strategy. **Appendix A** contains details of jurisdictions, legal requirements, and management direction that are applicable to this project.

#### **Consistency with Management Direction and Regulations**

The Proposed Action is consistent with the Endangered Species Act, National Forest Management Act, and LMP. It is also consistent with direction/guidance from applicable Biological Opinions. See the tables in **Appendix A** for more details, including the LMP standards applicable for plants and how this project is consistent with each.

### **I-3.0 – DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

The purpose of the proposed action is to amend Land Management Plan (LMP) Land Use Zone (LUZ) allocations for select Inventoried Roadless Areas (IRAs) on the Angeles (ANF), Cleveland (CNF), Los Padres (LPNF), and San Bernardino National Forests (SBNF) and to amend LMP monitoring and evaluation protocols. This action is needed to respond to the terms of the Settlement Agreement between the Forest Service, State of California, and other settlement parties. This proposed amendment to the 2006 LMPs is limited in scope and designed to address the terms of the settlement agreement.

The proposed action is to modify the existing land use zones in the identified IRAs to include more Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW) areas on the four National Forests.

#### **Inventoried Roadless Areas**

**Table 2** displays the IRAs that are being evaluated under this proposed action. Maps showing the locations of the IRAs and Wilderness areas for each National Forest follow.

<b>Table 2. IRAs Within The Southern California National Forests</b>	
<b>National Forest</b>	<b>Inventoried Roadless Areas</b>
<b>Angeles</b>	Fish Canyon, Red Mountain, Salt Creek, Tule, West Fork, Westfork
<b>Cleveland</b>	Barker Valley, Caliente, Cedar Creek*, Coldwater, Eagle Peak, Ladd, No Name, Sill Hill, Trabuco, Upper San Diego River Gorge*
<b>Los Padres</b>	Antimony, Black Mountain, Cuyama, Diablo, Dry Lakes, Fox Mountain, Garcia Mountain, Juncal, Machesna Mountain, Malduce Buckhorn, Quatal, Sawmill Badlands, Spoor Canyon, Tequepis, White Ledge
<b>San Bernardino</b>	Cactus Springs B, Cucamonga B, Cucamonga C, Pyramid Peak A, Raywood Flats B
<b>Angeles and Los Padres</b>	Sespe Frazier
*Cedar Creek and Upper San Diego River Gorge are areas the public has proposed for wilderness designation and were analyzed for potential wilderness designation in the Final EIS supporting the revised LMPs.	

Three potential actions are being considered: No Action (Alternative 1), the Proposed Action (Alternative 2), and an alternative that would maximize the designation of wilderness areas (Alternative 3). The Proposed Action is the Preferred Alternative. For reference, **Table 3** displays the suitable uses for each LUZ type. Overview maps of the IRAs are displayed below; detailed maps can be found in the Draft SEIS.

#### Alternative 1 - No Action

Under the No Action alternative, the current LUZs would be retained on the four Southern California National Forests (ANF, CNF, LPNF, and SBNF) in the identified IRAs. The maps for the No Action alternative (in Appendix 1 of the DEIS and available online) reflect the current LUZ allocations adopted as part of the revised LMP Alternative 4a (USDA Forest Service 2006b).

#### Alternative 2 – Proposed Action

The Proposed Action responds to the Settlement Agreement by re-zoning the majority of the land use zone allocations within the IRAs listed in the Settlement Agreement to Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW). The proposed action allocations are based on the wilderness evaluations for the IRAs that were updated concurrent with this analysis (Appendix 2 of the DEIS). Two of the areas in DEIS Appendix 2 are undeveloped areas proposed by the public and evaluated for wilderness potential in the 2006 LMP revision but are not Inventoried Roadless Area per the RACR. Nevertheless, for the purpose of aiding readability of this environmental document, narrative or tables may refer to these areas collectively as IRAs. The wilderness evaluations identify the capability, suitability, and need for wilderness associated with each IRA. Based on this updated analysis, the Proposed Action land use zones were developed using the following guidelines:

- Existing RW land use zones were maintained.
- Areas within the IRAs that are capable and available for wilderness in areas of high need

were allocated to RW. Capable and available areas adjacent to the settlement IRAs were also included in the RW allocation when inclusion created a more logical wilderness area boundary.

- Areas that are capable and available for wilderness in areas of low or moderate need were allocated to BCNM.
- Areas not capable or suitable for wilderness were allocated to other land use zones as follows:
  - Motorized access on existing authorized roads and trails was maintained, with 100 foot buffers applied along county and forest roads, and 300 foot buffers applied along state highways. The current plan allocation for these roaded areas, which will not change as part of this amendment, is a mix of Back Country (BC) or Back Country Motorized Use Restricted (BCMUR).
  - Existing Developed Area Interface (DAI) zones were maintained around structures/facilities to provide for fuel treatments. DAI zones in chaparral fuels were set a minimum distance of 300 feet from structures, with larger DAI zones in timbered areas.
  - Fuel breaks were buffered 300 feet if there was a National Forest System (NFS) road or motorized trail associated with the fuel break.
  - Facilities authorized under permit such as communication sites and powerlines not already in BCNM or RW were buffered to maintain the current allocations.
- Critical Biological (CB) zones were maintained or included in RW.

In response to scoping, the following incremental changes were incorporated into the proposed action:

- Several Forest Service trails in the proposed Salt Creek and Fish Canyon RW areas were removed from the proposed action to allow continued use by mountain bikes.
- The corridor along the Gold Hill road in the Sespe-Frazier IRA was widened to maintain suitable LUZ allocations for an Off-Highway Vehicle (OHV) trail parallel to the road.
- The Ribbonwood Equestrian camp ground in the Cactus Springs B IRA was removed from the proposed action to maintain the current LUZ.
- The following standard is proposed for the Los Padres LMP:
  - LPNF S2 – The Los Padres Condor Range and River Protection Act of 1992 states, "The Toad Springs road corridor delineated as potential wilderness shall remain open to off-road traffic until construction of an alternate route, which bypasses this area, is completed. These potential wilderness lands shall be automatically incorporated in and managed as part of the Chumash Wilderness upon publication of a notice in the Federal Register." In furtherance of this act, the Forest Supervisor may approve an alternate route consistent with LMP standards with the following exception:
    - Off-highway vehicle use of forest system trails is considered suitable for BCMUR and BCNM land use zone allocations if the trail construction is conditioned on permanent closure of the Toad Springs trail.
- Projects currently under contract, permit, or other authorizing instrument (such as grazing permits and electronic sites) will not be affected by the decision; however, projects may be modified to adopt all or part of this direction where Forest Service managers deem appropriate. Re-issuance of existing authorizations will be treated as new decisions, which must be consistent with any new direction adopted as part of the amendment.

Table 3. Suitable Uses Within Land Use Zones and the Roadless Rule (RACR)							
Activity or Use	Land Use Zone						IRA/RACR 36 CFR 294 Subpart B
	Developed Areas Interface (DAI)	Back Country (BC)	Back Country Motorized Use Restricted (BCMUR)	Back Country Non-Motorized (BCNM)	Critical Biological (CB)	Recommended Wilderness/ Wilderness (RW/W)	
Resource Management							
Rangeland Type Conversion for Forage production	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Restoration of Vegetation Condition	Suitable	Suitable	Suitable	Suitable	*By Exception	Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Disposal of National Forest System lands	*By Exception	*By Exception	*By Exception	*By Exception	*By Exception	Not Suitable	Suitable
Public Use and Enjoyment							
Recreation Residence Tracts	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Organization Camps	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Lodges, Resorts and Clubs	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Hunting and Fishing	Regulated by the State (CDFG)	Regulated by the State (CDFG)	Regulated by the State (CDFG)	Regulated by the State (CDFG)	Regulated by the State (CDFG)	Regulated by the State (CDFG)	Regulated by the State (CDFG)
Target Shooting Areas	*By Exception	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Public Motorized Use on Forest System Roads	Suitable	Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable <sup>2</sup>
Authorized Motorized Use	Suitable	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Suitable
Off-Highway Vehicle Use on Forest System Roads and Trails	Designated Roads and Trails	Designated Roads and Trails	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable <sup>2</sup>
Public Motorized Use off Forest System Roads and Trails	Suitable in Designated Open Areas	Suitable in Designated Open Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable <sup>2</sup>
Mountain Bikes	Unless	Unless	Unless Otherwise	Unless	Unless	Not Suitable	Suitable <sup>2</sup>

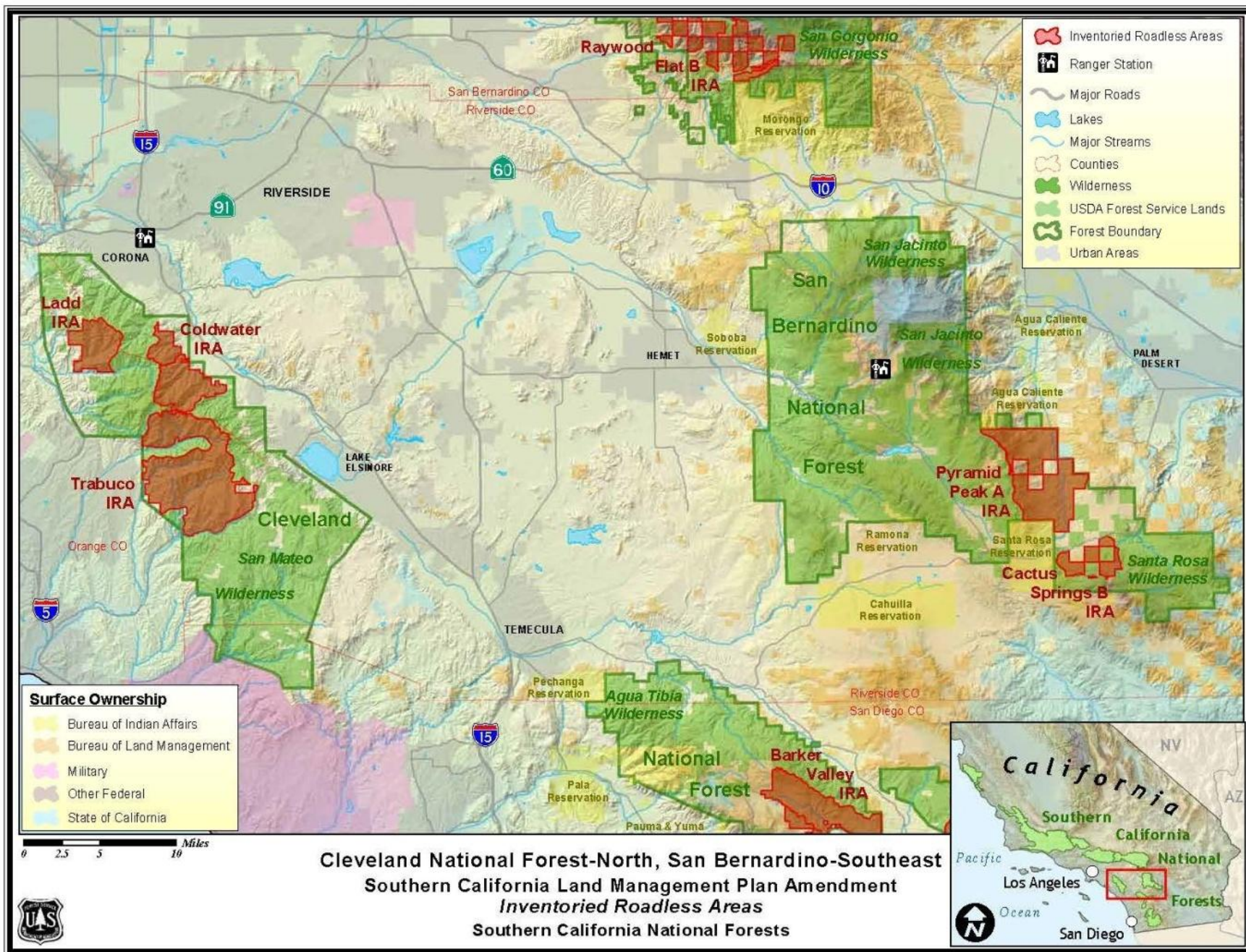
<b>Table 3. Suitable Uses Within Land Use Zones and the Roadless Rule (RACR)</b>							
<b>Activity or Use</b>	<b>Land Use Zone</b>						<b>IRA/RACR 36 CFR 294 Subpart B</b>
	<b>Developed Areas Interface (DAI)</b>	<b>Back Country (BC)</b>	<b>Back Country Motorized Use Restricted (BCMUR)</b>	<b>Back Country Non-Motorized (BCNM)</b>	<b>Critical Biological (CB)</b>	<b>Recommended Wilderness/ Wilderness (RW/W)</b>	
Forest System Roads and Trails	Otherwise Restricted	Otherwise Restricted	Restricted	Otherwise Restricted	Otherwise Restricted		
Dispersed Area Camping	Suitable Unless Otherwise Restricted	Suitable Unless Otherwise Restricted	Suitable Unless Otherwise Restricted	Suitable Unless Otherwise Restricted	Not Suitable	Suitable Unless Otherwise Restricted	Suitable <sup>3</sup>
<b>Commodity and Commercial Uses</b>							
(Non-Rec) Special Uses: Low Intensity Land Use	Suitable	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Suitable if activity meets prohibitions <sup>1</sup>
Communication Sites	Designated Areas	Designated Areas	Designated Areas	*By Exception	*By Exception	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Livestock Grazing	Designated Areas	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Designated Areas	Suitable
Major Transportation Corridors	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not suitable
Major Utility Corridors	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Road construction or re-construction	Suitable	Suitable	Suitable for authorized use	Not Suitable	Not Suitable	Not Suitable	By Exception <sup>4</sup>
Developed Facilities	Suitable	Suitable	*By Exception	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Oil and Gas Exploration and Development Areas	Suitable	Suitable	*By Exception	*By Exception	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Minerals Resources Exploration and Development	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Renewable Energy Resources	Suitable	Suitable	*By Exception	*By Exception	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Wood Products, including fuelwood	Suitable	Suitable	Suitable	Suitable	*By Exception	Not Suitable	By Exception

<b>Table 3. Suitable Uses Within Land Use Zones and the Roadless Rule (RACR)</b>							
<b>Activity or Use</b>	<b>Land Use Zone</b>						<b>IRA/RACR 36 CFR 294 Subpart B</b>
	<b>Developed Areas Interface (DAI)</b>	<b>Back Country (BC)</b>	<b>Back Country Motorized Use Restricted (BCMUR)</b>	<b>Back Country Non-Motorized (BCNM)</b>	<b>Critical Biological (CB)</b>	<b>Recommended Wilderness/ Wilderness (RW/W)</b>	
harvesting							
Special Forest Products	Suitable	Suitable	Suitable	Suitable	*By Exception	*By Exception	Suitable
<b>Fire and Fuels Management</b>							
Community Protection Areas	Suitable	Suitable	Suitable	Suitable	*By Exception	*By Exception	Suitable if activity meets prohibitions <sup>1</sup>
Fuelbreak Construction including type conversion	Suitable	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Suitable if activity meets prohibitions <sup>1</sup>
Wildland Fire Use Strategy	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
<p>* By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.</p> <p><sup>1</sup> Suitable if the activity is currently authorized, or can be conducted using existing classified roads or trails. Timber cutting is allowed incidental to the activity (294.13((b) (2))).</p> <p><sup>2</sup> Subject to travel management restrictions 36 CFR 212 and 36 CFR 261</p> <p><sup>3</sup> Subject to forest closures 36 CFR 261</p>							

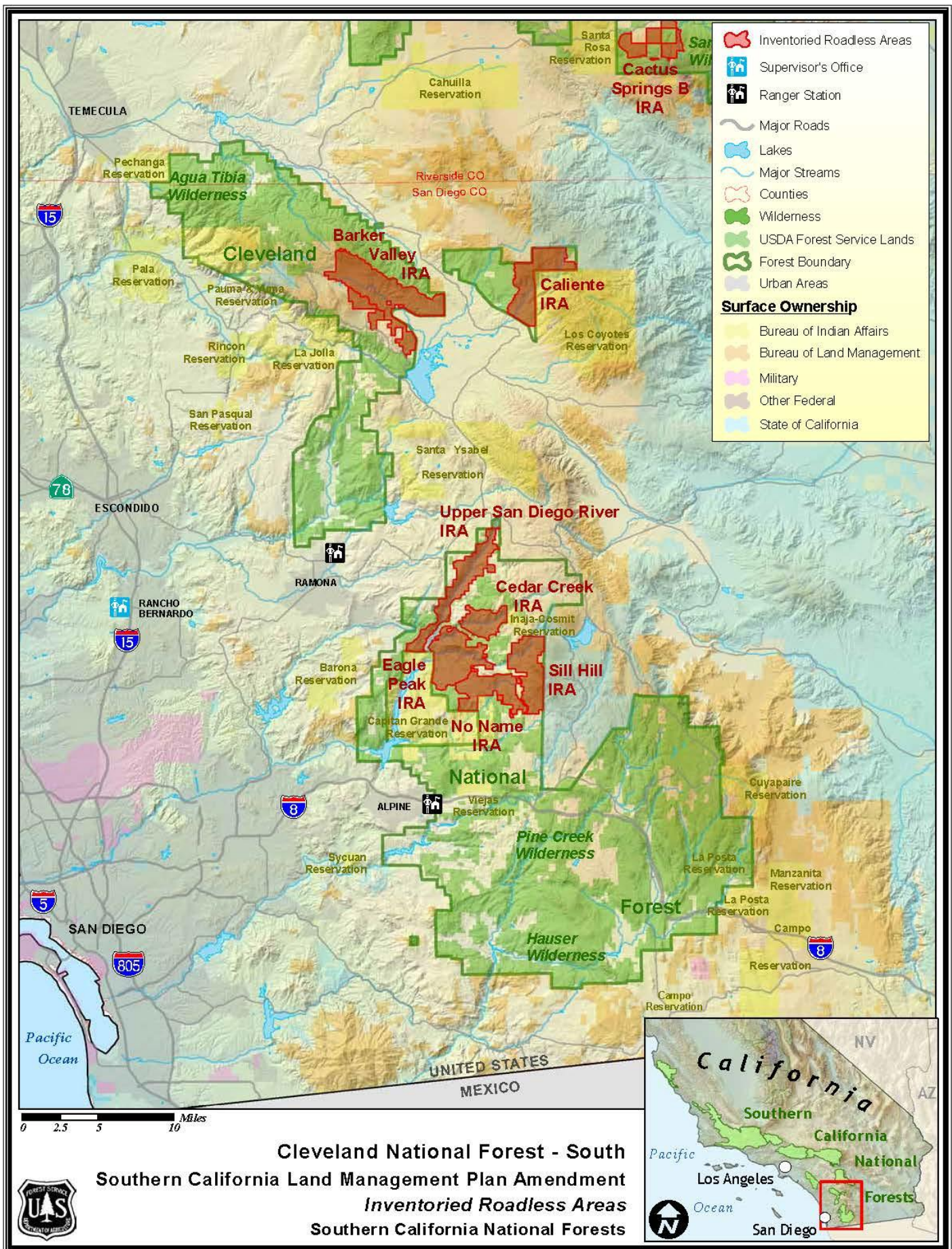




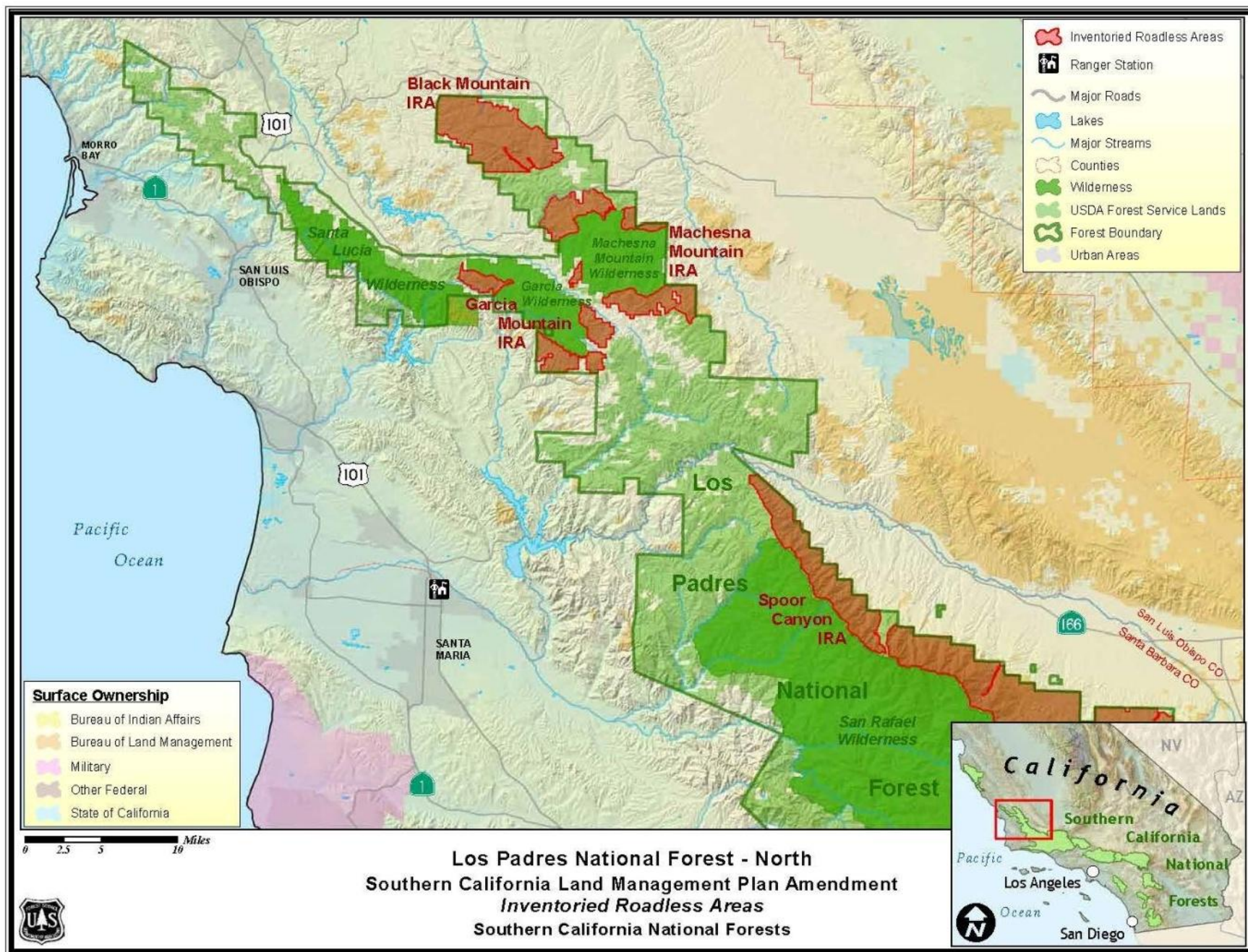




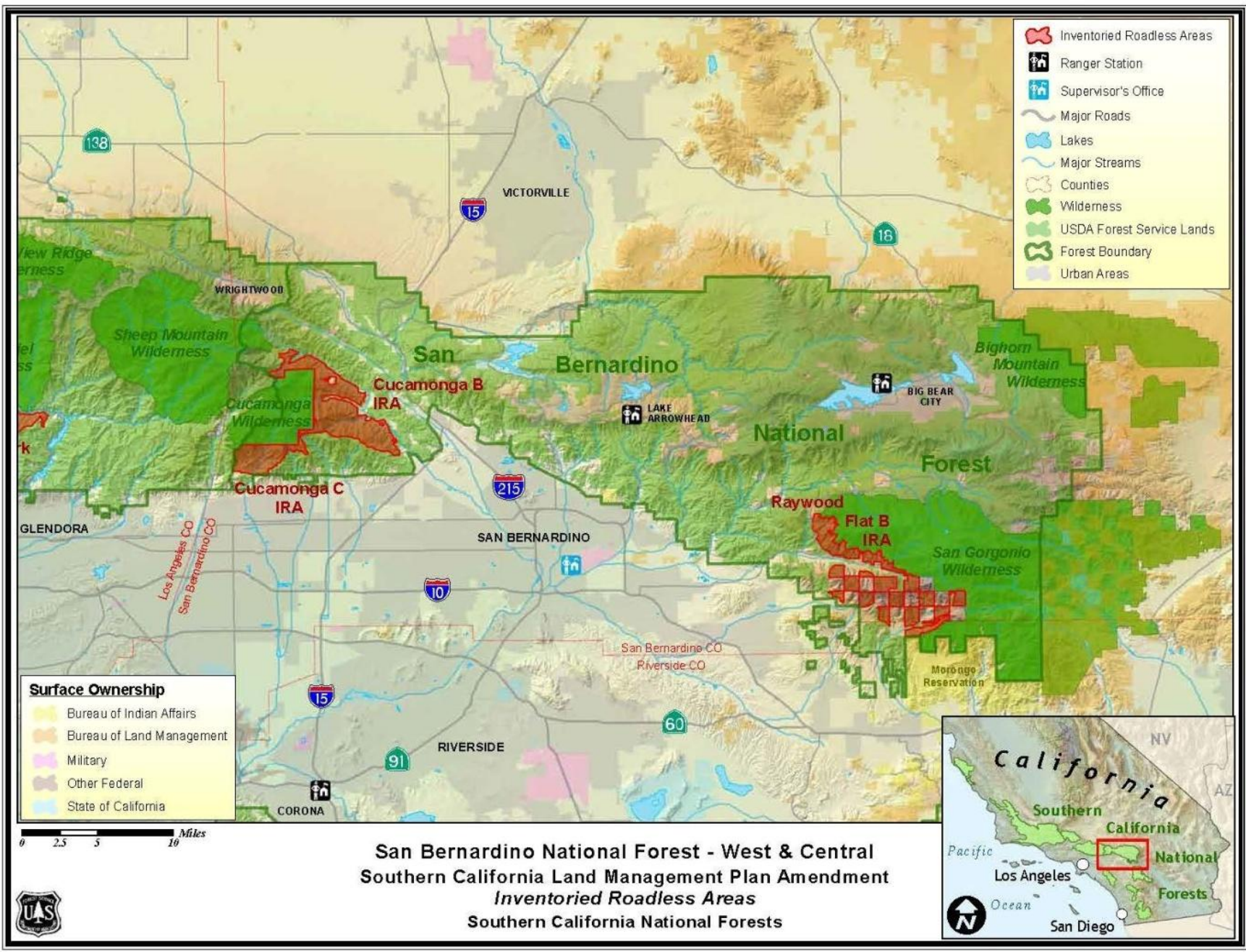












**San Bernardino National Forest - West & Central**  
**Southern California Land Management Plan Amendment**  
**Inventoried Roadless Areas**  
**Southern California National Forests**



### Alternative 3 – Recommended Wilderness Emphasis

Alternative 3 was developed in response to comments from groups that wanted more recommended wilderness. Alternative 3 rezones the majority of the land use zones allocated within the IRAs to RW as shown on the maps in Appendix 1. The same guidelines used to avoid conflicting uses in Alternative 2 apply to Alternative 3 with the following exception:

- Forest Service non-motorized trails were not excluded from RW allocations in any area.

The following two areas were not allocated to RW for the reasons described:

- Portions of the Sespe-Frazier IRA were not included in the RW allocations due to the extensive road system within the IRA.
- The Ladd IRA was not allocated to RW because it is bisected by a major utility corridor. That same corridor bisects the Coldwater IRA, and the area north of the corridor was not allocated to RW because of its small size.

### Monitoring and Evaluation Requirements

The secondary component of the proposal is to amend LMP monitoring and evaluation protocols. There are three alternatives, including not amending the current monitoring and evaluation requirements.

#### Alternative A - No Action

There would be no change to the current monitoring requirements (USDA Forest Service 2006; LMP Part 3, Appendix C) under the No Action alternative.

#### Alternative B - The Proposed Action

The proposed action includes monitoring and evaluation requirements described in more detail in Appendix 3. The proposed action monitoring and evaluation requirements are based on the current monitoring and evaluation requirements with the following revisions:

- Update Part 1 monitoring questions to:
  - Include a question for mortality risk.
  - Add a question for riparian condition and drop the question for general forest activities.
  - Add an indicator for unauthorized roads and trails.
  - Clarify and update several indicators to reflect current inventory methodology.
- Add a section that describes the implementation of Part 1 monitoring in greater detail.
- Expand the description of Part 3 monitoring to provide more detail on how to select projects for monitoring.

The monitoring proposed action was incrementally changed after scoping to focus on the monitoring questions and indicators and less on the specific details of implementation.

#### Alternative C - Extensive Monitoring

Alternative C, described in more detail in Appendix 3 of the DEIS, provides for more intensive inventories and surveys than the current monitoring plan or Alternative B. It is based in part on the concepts promoted by the conservation groups during scoping.

Alternative C follows the same general format as the Proposed Action Monitoring Alternative in so much as it has monitoring requirements that are associated with all three parts of the LMP.

Alternative C would maintain three part strategy with more use of baseline inventories for Part 1 monitoring. The baseline inventories would use a sampling approach. Under Alternative C, Part 1 focuses on monitoring effects of management relative to plan objectives, with indicators updated for current metrics. Part 2 reports accomplishment. Alternative C would monitor more projects under Part 3 based on a 20% annual sample of new projects and a 20% sample of ongoing projects.

#### **Agency Preferred Alternative**

The regulations at 40 CFR § 1502.14(e) require the Forest Service to identify the agency's preferred alternative if one or more exists, in the draft statement. According to the Council on Environmental Quality (CEQ), the "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors (CEQ 1981). Identification of the "agency's preferred alternative" in the environmental document informs the public of the agency's current preferred course of action (FSH 1909.15 § 16).

The preferred land use zone alternative for the Angeles, Los Padres, and San Bernardino National Forests is Alternative 2. The preferred land use zone alternative for the Cleveland National Forest is Alternative 2, with the exception of the Cedar Creek undeveloped area where the preferred alternative is to expand the recommended wilderness to the east as proposed in Alternative 3 (see the map in Appendix 1g, page 3 of the DEIS). The preferred monitoring alternative for all four southern California national forests is Alternative B.

#### **Features Common to All Alternatives**

##### **LMP Direction**

The proposed amendment does not change the forest wide management direction adopted in 2006. The existing LMP land use zone definitions, the suitable uses identified within the individual land use zones, and the plan standards remain as described in the current LMPs. Land use zone descriptions and suitable uses are found in Part 2 of the LMPs, forest specific plan standards are also in Part 2, and plan standards applicable to all four forests are found in Part 3.

Existing direction that will not change also includes the Regional Forester's decisions for recommended Wild and Scenic Rivers, Research Natural Areas, and Special Interest Areas. These decisions are outlined in the individual Record of Decision for each forest, and also described in Part 2 of the LMPs.

##### **Implementation of the 2001 Roadless Area Conservation Rule**

The proposed amendment will not affect the implementation of the 2001 Roadless Area Conservation Rule (36 CFR Part 294 Subpart B). The Roadless Area Conservation Rule (RACR) was published in the Federal Register on January 12, 2001 (66 FR 3244). Ten lawsuits were filed challenging the rule. In May 2001, a preliminary injunction barring implementation of the rule was issued by a federal district court in Idaho. The Ninth Circuit Court of Appeals reversed that ruling, and the RACR became effective in April 2003.

In July 2003, a federal district court in Wyoming upheld a State of Wyoming challenge to the RACR holding that promulgation of the RACR was procedurally flawed under the National Environmental Policy Act and substantively illegal under the Wilderness Act. The court

permanently enjoined the rule. The decision was appealed to the Tenth Circuit Court of Appeals, but the court declared the case moot and vacated the Wyoming order after the 2005 State Petitions Rule was promulgated.

The LMPs for the four forests were issued when the 2005 State Petitions Rule was in effect. Under the State Petitions Rule, the land use zone allocations made in the LMPs included designations that allowed road construction and reconstruction in approximately 28% of the one million acres of IRAs within the four southern California National Forests.

The 2005 State Petitions Rule triggered two additional lawsuits in a district court of California. On September 20, 2006, the California court set aside the State Petitions Rule, and reinstated the RACR. The decision was appealed and on August 5, 2009, the appellate court affirmed the district court's ruling.

In response to the reinstatement of the RACR, the State of Wyoming filed a second lawsuit (*Wyoming II*) challenging the RACR. On August 12, 2008, the Wyoming court again set aside and enjoined the RACR. The Wyoming decision placed the Forest Service in a conundrum of trying to comply with the California court's order *to follow* the RACR and the Wyoming court's order *to not follow* the RACR. The government filed an appeal on August 13, 2009 to the Tenth Circuit Court.

On October 21, 2011, the 10<sup>th</sup> Circuit Court of Appeals reversed the Wyoming District Court and upheld USDA's 2001 Roadless Rule in Wyoming v. USDA. On March 2, 2012, Judge Brimmer (Wyoming) lifted his injunction on the 2001 Roadless Rule. Although Wyoming petitioned the Supreme Court for review, the petition for a writ of certiorari was denied by the Supreme Court on October 1, 2012.

Under the RACR, new road construction and reconstruction are generally prohibited in IRAs, and timber harvest is only permitted under a few limited exceptions. All LMP direction allowing road reconstruction and reconstruction in IRAs is superseded by the 2001 Roadless Rule without further agency action, and Forest Service project decisions will be guided by the LMP direction as modified by the RACR.

### **Comparison of Alternatives**

This section provides a summary of the effects of implementing each alternative. The comparison is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

The planning area includes all the NFS lands within the settlement agreement IRAs (614,130 acres), and adjacent NFS lands that were included in RW allocations (8,898 acres). The total area considered is 623,028 acres.

The alternatives differ in the amount of area allocated between BCNM and RW. As shown in **Figure 1** and summarized in **Table 4**, the planning area is mainly zoned in BC, BCMUR, and BCNM under the current LMP (Alternative 1 – No Action). Under Alternative 2, the primary change is a large increase in BCNM and a smaller increase in RW. Alternative 3 allocates the



majority of the area to RW. The CB and DAI zones both decrease slightly under Alternatives 2 and 3.

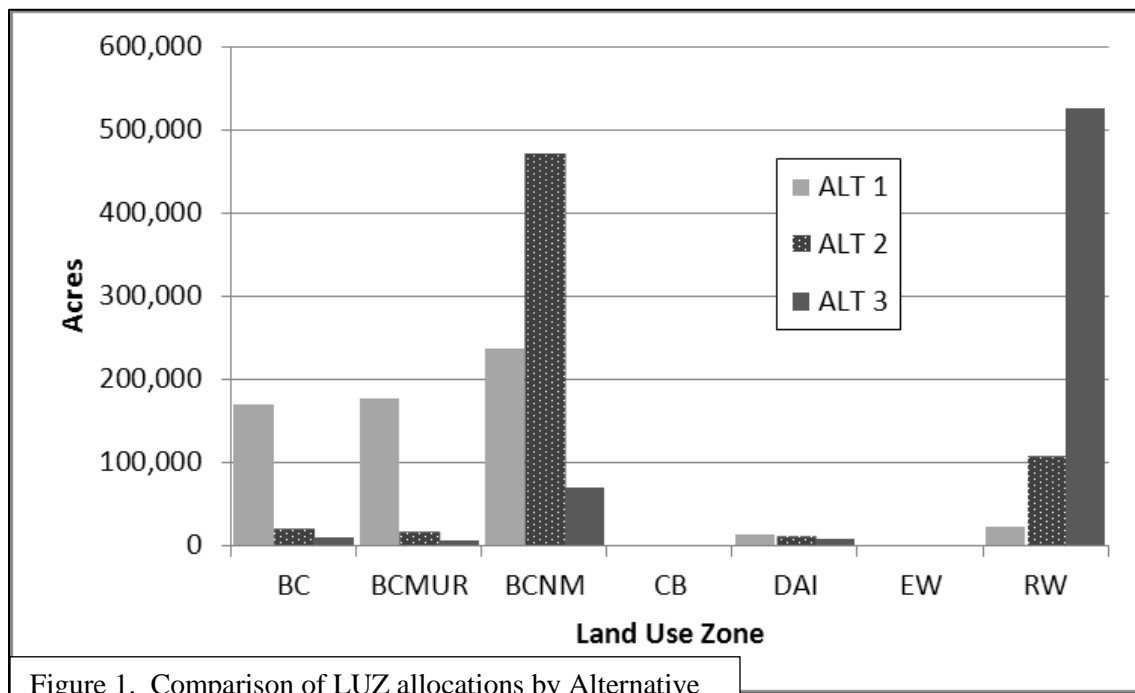


Figure 1. Comparison of LUZ allocations by Alternative

**Table 4** displays the acreages of each type of land use zone for each alternative, broken out by National Forest.

<b>Table 4. Summary of LUZ Acreage Allocations for Each Forest by Alternative</b>			
<b>Land Use Zone</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
<b>Angeles</b>			
Back Country	2,390	826	312
Back Country Motorized Use Restricted	3,370	669	608
Back Country Non-Motorized	62,608	27,150	1,035
Critical Biological	326	12	0
Developed Area Interface	1,505	476	529
Existing Wilderness	8	8	8
Recommended Wilderness	0	41,065	67,715
<b>Cleveland</b>			
Back Country	6,180	1,879	1,748
Back Country Motorized Use Restricted	5,666	3,396	2,353
Back Country Non-Motorized	68,187	34,898	6,131
Critical Biological	507	507	0
Developed Area Interface	3,000	1,321	1,316

<b>Table 4. Summary of LUZ Acreage Allocations for Each Forest by Alternative</b>			
<b>Land Use Zone</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
Existing Wilderness	0	0	0
Recommended Wilderness	0	41,539	71,991
<b>Los Padres</b>			
Back Country	154,640	15,935	8,144
Back Country Motorized Use Restricted	164,696	10,114	3,406
Back Country Non-Motorized	86,581	379,878	62,167
Critical Biological	395	395	395
Developed Area Interface	7,032	7,021	6,527
Existing Wilderness	936	936	936
Recommended Wilderness	5,306	5,306	338,011
<b>San Bernardino</b>			
Back Country	6,882	394	377
Back Country Motorized Use Restricted	2,813	609	625
Back Country Non-Motorized	20,332	29,691	155
Critical Biological	0	0	0
Developed Area Interface	1,440	773	773
Existing Wilderness	11	11	11
Recommended Wilderness	18,218	18,218	47,755

**Table 5** compares the alternatives based on the issues. **Table 6** compares the Management Practices by Alternative. **Table 7** compares the Monitoring Alternatives

<b>Table 5. Comparison of Land Use Zone Alternatives Based on Issues</b>			
<b>Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
<b>Natural Resources Environment</b>			
Vegetation	Limited treatment of vegetation under the current LMP and restrictions under the RACR.	Vegetation treatment reduced as area suitable for motorized access and commodity development is reduced.	Vegetation treatment reduced within the planning area as most areas are allocated to RW.
Wildlife	Limited changes to individuals and habitat under the current LMP and restrictions under the RACR.	Reduced potential impact to individuals and habitat due to restrictions on future motorized access and commodity development. No change in ability to implement recovery plans. Higher protection of critical habitat primary constituent elements. Can maintain, enhance, and treat TES habitat.	Reduced potential impact to individuals and habitat due to restrictions on future motorized access and commodity development. No change in ability to implement recovery plans. Highest protection of critical habitat primary constituent elements. Can maintain, enhance, and treat TES habitat.
Wildlife structures	Wildlife improvements can be maintained in all areas subject to RACR restrictions.	No change in ability to maintain wildlife improvements.	No change in ability to maintain wildlife improvements.
Botanical Resources	No change from existing environment. Can maintain, enhance, and treat TES habitat. Can restore, protect and maintain essential features of critical habitat and areas with special management considerations.	More habitats in restrictive LUZs, less potential impact to individuals and habitat. Can maintain, enhance, and treat TES habitat. Can restore, protect and maintain essential features of critical habitat and areas with special management considerations.	Most habitats in RW LUZs, least potential impact to individuals and habitat. Can maintain, enhance, and treat TES habitat. Can restore, protect and maintain essential features of critical habitat and areas with special management considerations.

<b>Table 5. Comparison of Land Use Zone Alternatives Based on Issues</b>			
<b>Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
Invasive Non-native Species	No change from existing environment. Potential for introduction and spread of non-native species from roads, recreation and uses. Can implement management of non-natives.	Reduced potential for introduction and spread with reduced future motorized access or use. Can implement management of non-natives.	Most potential for reduced introduction and spread with reduced future motorized access or use. Can implement management of non-natives.
Watershed Condition	Some improvements in watershed condition over time as LMP standards are implemented.	Some improvements in watershed condition over time as LMP standards are implemented and future motorized access and development is limited.	Moderate improvements in watershed condition over time as LMP standards are implemented and future motorized access and development is restricted by RW allocations.
Air Quality	Increased engine emissions and dust from driving. Increased emissions from prescribed fire and wildfire.	Increased engine emissions and dust from driving. Increased emissions from prescribed fire and wildfire.	Increased engine emissions and dust from driving. Increased emissions from prescribed fire and wildfire.
Special Interest Areas	No change in current management.	No change in current management.	Potential conflict with interpretative purpose of Sierra Madre SIA.
<b>Social and Economic Environment</b>			
Heritage Resources	No change in current management. Heritage resources protected through implementation of LMP standards and other legal requirements.	No change in current management. Heritage resources protected through implementation of LMP standards and other legal requirements. Less potential for disturbance as future uses are limited by more restrictive LUZs.	No change in current management. Heritage resources protected through implementation of LMP standards and other legal requirements. Less potential for disturbance as future uses are limited by more restrictive LUZs.

<b>Table 5. Comparison of Land Use Zone Alternatives Based on Issues</b>			
<b>Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
Tribal and Native American Interests	No change in current management.	Greater protection may favor values held to be of importance to Native American communities. Restrictions on future motorized access may limit access to sacred places.	Greater protection may favor values held to be of importance to Native American communities. Restrictions on future motorized access may limit access to sacred places.
Recreation	No change in existing uses.	Minimal change in existing uses. Future uses focused on non-motorized activities.	Moderate change in existing uses (mountain biking). Future uses focused on non-motorized activities.
Recreational user access	No change to existing access.	No change to existing access. New road access limited by more restrictive LUZs and the RACR. Mountain bike access accommodated in high use areas.	Minor change to existing motorized access. New road access limited by more restrictive LUZs, and the RACR. Mountain bike access prohibited in RW areas.
Hunting	No change in current use or level of access.	No change in current use or level of motorized access. Use of mechanized equipment prohibited in RW areas. Quality of experience may be increased due to potential for less people with BCNM.	Minor change in current level of motorized access. Use of mechanized equipment prohibited in RW areas. Quality of experience may be higher due to potential for less people in RW.
Tourism	No change in tourism.	No change in tourism.	No change in tourism.
Accessibility for Americans with Disabilities	No change in current access.	No change in current access.	Minor change in current access.
Wild and Scenic Rivers (W&SR)	No change in current management. Eligible rivers managed under LMP direction to protect eligibility.	Some segments allocated to more restrictive LUZs. Eligible rivers managed under LMP direction to protect eligibility.	More segments allocated to the more restrictive RW LUZ. Eligible rivers managed under LMP direction to protect eligibility.

<b>Table 5. Comparison of Land Use Zone Alternatives Based on Issues</b>			
<b>Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
Scenic Integrity	No change in current management.	More landscape managed at high and very high SIO. Greater focus on naturally appearing landscape.	Most areas managed at very high SIO for naturally appearing landscapes.
Law enforcement (LE) and emergency response, border security, and illegal uses	No change in current management.	No change in emergency response or illegal uses. Border security continued under existing MOU. Administrative approval required for non-emergency LE motorized access to RW areas.	No change in emergency response or illegal uses. Border security continued under existing MOU. Administrative approval required for non-emergency LE motorized access to RW areas.
Economics	No change.	Limited change due to increased restrictions, but most development already limited by RACR. Management costs in RW would be higher.	Limited change due to increased restrictions, but most development already limited by RACR. Management costs in RW would be higher.
<b>Facility Operations and Maintenance</b>			
Roads and Trails	Roads open to public travel as shown on the MVUM. Permitted roads limited to administrative use.	No change in open public roads. Some permitted roads included in RW allocations. Trail maintenance costs in RW would be higher.	Limited change in open public roads. Many permitted roads included in RW allocations. Mountain bike access prohibited in RW areas. Trail maintenance costs in RW would be higher.
Road and Trail maintenance	Funding expected to decline and importance of volunteer maintenance expected to increase.	No change in funding or importance of volunteers.	No change in funding or importance of volunteers. Source of volunteer workers could shift as use shifts to non-mechanized users in RW areas.
<b>Commodity and Commercial Uses</b>			
Grazing Permits	No change in grazing use.	No change in grazing use.	No change in grazing use.

<b>Table 5. Comparison of Land Use Zone Alternatives Based on Issues</b>			
<b>Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
Locatable minerals	No changes to current uses. New road access subject to valid existing rights under the RACR.	No changes to current uses. New road access subject to valid existing rights under the RACR.	No changes to current uses. New road access subject to valid existing rights under the RACR.
Special Uses	No change in current management. Uses allowed in BCNM areas by exception.	No change to existing uses. Less area suitable for special uses.	No change to existing uses. Most of the planning area not suitable for special uses.
<b>Lands (Real Estate)</b>			
Private lands	No change in existing management. Access to private land based on ANILCA.	No change in existing management. Access to private land based on ANILCA.	No change in existing management. Access to private land based on ANILCA. Access through RW would need to be consistent with the wilderness act.
<b>Wildland Fire and Community Protection</b>			
Fire Suppression in IRAs	No change in fire suppression.	No change in access on existing roads and no changes in activities allowed. Administrative approval needed for motorized use in RW.	Limited change in road access on existing roads and no changes in activities allowed. Administrative approval needed for motorized use in RW.
Fuels management	No change in fuels management.	Minimal changes in fuels management. Fuels treatment in RW would likely shift to less intensive treatments.	Moderate changes in fuels management. Fuels treatment in RW would likely shift to less intensive treatments.
Fire Cooperators	No change on cooperators. Operations on NFS lands subject to control of Forest Service incident commanders operating in unified command.	No change on cooperators. Operations on NFS lands subject to control of Forest Service incident commanders operating in unified command.	No change on cooperators. Operations on NFS lands subject to control of Forest Service incident commanders operating in unified command.
<b>Coordination with Other Public Planning Efforts</b>			
Consistency with other plans	Consistent with other federal, state, and local plans.	Consistent with other federal, state, and local plans.	Consistent with other federal, state, and local plans.

Table 6. Comparison Of Management Practices By Alternative			
Appropriate Uses/Actions	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
<b>Roads</b> <ul style="list-style-type: none"> <li>• National Forest System</li> <li>• Private</li> <li>• County</li> <li>• Administrative (Special Use Permit)</li> <li>• Temporary</li> </ul>	<p><i>Public Access:</i> No changes to public access on 166 miles of currently-open roads in the IRAs.</p> <ul style="list-style-type: none"> <li>• ANF: 7.3 miles</li> <li>• CNF: 24.1 miles</li> <li>• LPNF: 125.9 miles</li> <li>• SBNF: 9.4 miles</li> </ul> <p><i>Land Use Zoning:</i> No changes to LUZ.</p> <p><i>Mileages of Road by Land Use Zones:</i>  BC: 80.7 miles  BCMUR: 63.2 miles  BCNM: 13.1 miles  CB: 0.4 miles  DAI: 8.9 miles  RW: 0 miles  EW: 0.2 miles</p>	<p><i>Public Access:</i> Same as Alternative 1.</p> <p><i>Land Use Zoning:</i> Only two Forest System roads would have a change in zoning. Neither is currently open to the public: Use of these roads would continue under the terms of special use permits. Areas include:</p> <ul style="list-style-type: none"> <li>• Small section of closed NFS road in Sespe-Frazier IRA (ANF) goes to BCNM;</li> <li>• 1 mile of administrative road under Special Use Permit on CNF goes to RW.</li> <li>• Several miles of permitted road on the LPNF go to BCNM.</li> </ul> <p><i>Mileages of Road by Land Use Zones:</i>  BC: 69.9 miles  BCMUR: 70.6 miles  BCNM: 15.9 miles  CB: 0.4 miles  DAI: 8.4 miles  RW: 1.1 miles  EW: 0.2</p>	<p><i>Public Access:</i> Public access along existing roads would not change except on the CNF:</p> <ul style="list-style-type: none"> <li>• Cedar Creek Road which is shown as open on MVUM though normally gated closed.</li> <li>• Eagle Peak Road below Saddleback is a County road that is gated and not shown as open on the MVUM.</li> </ul> <p><i>Land Use Zoning:</i> Many of the permitted roads on LP and CNF would be in RW. Authorized uses of these roads would continue subject to terms of permit.</p> <p><i>Mileages of Road by Land Use Zones:</i>  BC: 65.9 miles  BCMUR: 43.9 miles  BCNM: 3.8 miles  CB: 0.4 miles  DAI: 8.4 miles  RW: 43.9 miles  EW: 0.2</p>
<b>Motorized Trails</b>	<p><i>Public Access:</i> Public access to 118 miles of motorized trail in IRAs would not change.</p>	<p><i>Public Access:</i> Same as Alternative 1.</p>	<p><i>Public Access:</i> Same as Alternative 1.</p>



Table 6. Comparison Of Management Practices By Alternative			
Appropriate Uses/Actions	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
	<ul style="list-style-type: none"> <li>• LPNF: 118 miles</li> <li>• CNF, ANF and SBNF: 0 miles</li> </ul> <p><i>Mileages by Land Use Zone:</i>  BC: 117.2 miles  BCMUR: 0.2 miles  BCNM: 0 miles  DAI: 0.6 miles  RW: 0 miles</p>	<p><i>Mileages by Land Use Zone:</i>  Same as Alternative 1</p>	<p><i>Mileages by Land Use Zone:</i>  Same as Alternative 1</p>
<b>Non-motorized Trails</b> <ul style="list-style-type: none"> <li>• Mountain bike</li> <li>• Equestrian</li> <li>• Hiking</li> <li>• See Table 47 in Draft SEIS</li> </ul>	<p><i>Public Access:</i> Public access to 192 miles of non-motorized trail in IRAs would not change.</p> <ul style="list-style-type: none"> <li>• ANF: 26 miles</li> <li>• CNF: 47.2 miles</li> <li>• LPNF: 93.3 miles</li> <li>• SBNF: 25.4 miles</li> </ul> <p><i>Mountain Bike Trails:</i> All existing designated non-motorized trails outside of RW would remain open to mountain biking. The exception is the PCT which is already closed to mountain biking.</p> <p><i>Mileage by Land Use Zone:</i>  BC: 21.8 miles  BCMUR: 35.8 miles  BCNM: 97.4 miles  CB: 2.2 miles  DAI: 2.6 miles  RW: 5.2 miles  EW: 0.2 miles</p>	<p><i>Public Access:</i> Public access to 192 miles of non-motorized trail in IRAs would not change. Use types on some of the trails would change (see below).</p> <p><i>Land Use Zones:</i> More of non-motorized trail system would be in BCNM and RW.</p> <p><i>Mountain Bike Trails:</i> Mountain bike use on non-motorized trails would be excluded from:</p> <ul style="list-style-type: none"> <li>• Barker Spur Trail in RW</li> <li>• PCT (where it is already excluded)</li> </ul> <p>Thus, the only difference from Alternative 1 is the preclusion of mountain bikes from the Barker Spur Trail.</p> <p><i>Mileage by Land Use Zone:</i>  BC: 4.0 miles  BCMUR: 12.7 miles  BCNM: 125.3 miles  CB: 2.2 miles  DAI: 2.5 miles  RW: 19.6 miles  EW: 0.2 miles</p>	<p><i>Public Access:</i> Public access to 192 miles of non-motorized trail in IRAs would not change. Use types on some of the trails would change (see below).</p> <p><i>Land Use Zones:</i> Most of the non-motorized trail system in IRAs would be in RW.</p> <p><i>Mountain Bike Trails:</i> Mountain bike use on non-motorized trail system would be excluded over ½ in RW. Affected IRAs: Trabuco (CNF), Coldwater (CNF) and Fish Canyon (ANF).</p> <p><i>Mileage by Land Use Zone:</i>  BC: 3.2 miles  BCMUR: 3.4 miles  BCNM: 3.3 miles  CB: 2.2 miles  DAI: 1.9 miles  RW: 151.6 miles  EW: 0.2 miles</p>

Table 6. Comparison Of Management Practices By Alternative			
Appropriate Uses/Actions	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
<b>Unauthorized Routes</b>	<p><i>Land Use:</i> Status of 187.8 miles of unauthorized routes in IRAs would not change.</p> <ul style="list-style-type: none"> <li>• ANF: 19.5 miles</li> <li>• CNF: 44.7 miles</li> <li>• LPNF: 80.9 miles</li> <li>• SBNF: 42.7 miles</li> </ul> <p><i>Program Emphasis Changes:</i> No change in status of routes but unauthorized routes in BCNM and RW may have a higher priority for restoration work.</p> <p><i>Mileages By Land Use Zone:</i>  BC: 52.5 miles  BCMUR: 40.3 miles  BCNM: 62.7 miles  CB: 2.3 miles  DAI: 16.2 miles  RW: 13.4 miles  EW: 0.4 miles</p>	<p><i>Land Use:</i> More unauthorized routes would be in BCNM and RW than Alt 1.</p> <p><i>Program Emphasis Changes:</i> Same as Alternative 1.</p> <p><i>Mileages By Land Use Zone:</i>  BC: 18.7 miles  BCMUR: 24.2 miles  BCNM: 81.8 miles  CB: 2.3 miles  DAI: 12.6 miles  RW: 47.8 miles  EW: 0.4 miles</p>	<p><i>Land Use:</i> More unauthorized routes would be in RW.</p> <p><i>Program Emphasis Changes:</i> Same as Alternative 1</p> <p><i>Mileages By Land Use Zone:</i>  BC: 14.7 miles  BCMUR: 12.1 miles  BCNM: 11.3 miles  CB: 0 miles  DAI: 12.6 miles  RW: 136.7 miles  EW: 0.4 miles</p>
<b>Recreation</b> <ul style="list-style-type: none"> <li>• ROS</li> <li>• Dispersed Activities</li> <li>• Developed Recreation Facilities</li> </ul>	<p><i>Recreational Opportunity Spectrum:</i> No change from existing condition.</p> <p><i>Dispersed Recreation:</i> No change from existing condition.</p> <p><i>Dispersed camping:</i> All alternatives provide sufficient vehicle camping capacity.</p> <ul style="list-style-type: none"> <li>• ANF: Generally allowed forest-wide</li> </ul>	<p><i>Recreational Opportunity Spectrum:</i> Increases semi-primitive recreation opportunities and decreases semi-primitive motorized and roaded natural recreation opportunities. Increase in natural, open space setting preservation.</p> <p><i>Dispersed Recreation:</i> Greater emphasis on non-motorized and non-mechanized recreation than Alternative 1.</p> <p><i>Dispersed camping:</i> Same as Alternative 1.</p>	<p><i>Developed Recreation Opportunities:</i> Highest increase in semi-primitive recreation opportunities and highest decrease of semi-primitive motorized and roaded natural recreation opportunities. Provides most natural, open space setting preservation.</p> <p><i>Dispersed Recreation:</i> Greatest emphasis on non-motorized and non-mechanized use.</p> <p><i>Dispersed camping:</i> Same as Alternative 1</p>

Table 6. Comparison Of Management Practices By Alternative			
Appropriate Uses/Actions	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
	<p>except where posted otherwise. No change in any alternative.</p> <ul style="list-style-type: none"> <li>• CNF: Not allowed in Trabuco, Ladd, or Coldwater IRAs. Allowed in other IRAs subject to restrictions. No change in any alternative.</li> <li>• LPNF: Generally allowed throughout forest. No change in any alternative.</li> <li>• SBNF: Generally allowed throughout forest with some use restrictions. No change in any alternative.</li> </ul> <p><i>Wildlife and nature viewing:</i> Currently widespread and unrestricted. No change to access or quality of experience.</p> <p><i>Snow and Water Play:</i> Widespread and mostly unrestricted. No new snow play or water play site needs were identified in the LMP in any of the IRAs. No change.</p> <p><i>Hang-gliding take-off locations in IRAs:</i></p> <ul style="list-style-type: none"> <li>• LPNF: Pine Mountain, Nordhoff Ridge, Chief Peak (Sespe-Frasier IRA) - all sites are accessible with existing motorized access outside the IRA.</li> <li>• SBNF: Cucamonga B IRA, no current motorized access.</li> </ul> <p><i>Rock Climbing Sites:</i></p> <ul style="list-style-type: none"> <li>• Eagle Peak IRA (CNF): Currently, no motorized access to climbing sites; this would not change.</li> </ul>	<p><i>Wildlife and nature viewing:</i> Less mechanized and motorized access allowed; quality of experience may increase.</p> <p><i>Snow and Water Play:</i> Same as Alternative 1</p> <p><i>Hang-gliding take-off locations:</i> Motorized access to Cucamonga take off spot would not be permitted in RW.</p> <p><i>Rock Climbing Sites:</i> Same as Alternative 1.</p> <p><i>Access to Recreational Target Shooting:</i></p>	<p><i>Wildlife and nature viewing:</i> Least mechanized and motorized access allowed; highest potential increase in quality of experience.</p> <p><i>Snow and Water Play:</i> Same as Alternative 1</p> <p><i>Hang-gliding take-off locations:</i> Same as Alternative 2.</p> <p><i>Rock Climbing Sites:</i> Same as Alternative 1.</p> <p><i>Access to Recreational Target Shooting:</i></p> <ul style="list-style-type: none"> <li>• ANF: Same as Alternative 1.</li> </ul>

Table 6. Comparison Of Management Practices By Alternative			
Appropriate Uses/Actions	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
	<p><i>Access to Recreational Target Shooting:</i></p> <ul style="list-style-type: none"> <li>• <i>ANF:</i> “Place to shoot” concessionaire in and adjacent to Red Mountain IRA would continue to operate according to terms of current permit, no changes to target shooting elsewhere on the ANF.</li> <li>• <i>CNF:</i> Open shooting area on Palomar Divide Road located in part within Barker Valley IRA would not change. No changes to shooting on the remainder of CNF.</li> <li>• <i>LPNF:</i> IRAs currently open to shooting would remain open.</li> <li>• <i>SBNF:</i> No changes to shooting opportunities.</li> </ul> <p><i>Hunting and Fishing Access:</i> No access change from current condition.</p> <p><i>Developed Recreation Facilities:</i> Few IRAs have potential for new developed recreation facilities, none projected to be constructed at this time.</p> <p><i>Winter Sports:</i> No downhill skiing, snowboarding or Nordic skiing opportunities exist in IRAs. No change to individual use.</p>	<ul style="list-style-type: none"> <li>• <i>ANF:</i> Same as Alternative 1.</li> <li>• <i>CNF:</i> Approximately 30 percent of Palomar Divide Rd. shooting area would be in nonconformance with RW. No changes to shooting on the remainder of CNF.</li> <li>• <i>SBNF:</i> Same as Alternative 1</li> </ul> <p><i>Hunting and Fishing:</i> Compared to Alternative 1, less mechanized and motorized access and the same foot and equestrian access.</p> <p><i>Developed Recreation Facilities:</i> Same as Alternative 1.</p> <p><i>Winter Sports:</i> Same as Alternative 1</p>	<ul style="list-style-type: none"> <li>• <i>CNF:</i> Same as Alternative 2.</li> <li>• <i>LPNF:</i> 342,784 acres of IRAs currently open to shooting would be closed.</li> <li>• <i>SBNF:</i> Same as Alternative 1</li> </ul> <p><i>Hunting and Fishing:</i> Compared to Alternatives 1 and 2, less mechanized and motorized access and the same foot and equestrian access.</p> <p><i>Developed Recreation Facilities:</i> Same as Alternative 1.</p> <p><i>Winter Sports:</i> Same as Alternative 1</p>
<b>Recreation Special Uses</b> <ul style="list-style-type: none"> <li>• <b>Outfitter Guides</b></li> <li>• <b>Events/Gath-</b></li> </ul>	<p><i>Recreation Special Uses:</i> No changes to the recreation opportunities offered in partnership with commercial and non-commercial entities through SUP authorizations within the IRAs.</p>	<p><i>Recreation special uses:</i> Same as Alternative 1.</p>	<p><i>Recreation special uses:</i> Competitive recreation events held in Trabuco IRA would not be suitable in RW.</p>

Table 6. Comparison Of Management Practices By Alternative			
Appropriate Uses/Actions	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
<b>Recreation Residences</b>	<i>Recreation Residences:</i> None exists in the IRAs; thus, no changes would occur.	<i>Recreation Residences:</i> Same as Alternative 1	<i>Recreation Residences:</i> Same as Alternative 1
<b>Non-Recreation Special Uses</b> <ul style="list-style-type: none"> <li>• <b>Filming</b></li> <li>• <b>Utility Corridors</b></li> <li>• <b>Easements/Rights-of-Way</b></li> </ul>	<p>Approximately 359,515 acres (~58 percent of project area) of the IRAs would have LUZs suitable for non- recreation special use activities. No changes would occur.</p> <p>Acres available for special uses by Forest:</p> <ul style="list-style-type: none"> <li>• ANF: 7,265 acres (10.3 percent)</li> <li>• CNF: 14,751 acres (17.6 percent)</li> <li>• LPNF: 326,365 acres (78 percent)</li> <li>• SBNF: 11,135 acres (22.4 percent)</li> </ul>	<p>Approximately 42,320 acres (~6.7 percent of project area) of the IRAs would have LUZs suitable for non- recreation special use activities.</p> <p>Acres available for non-recreation special uses by Forest:</p> <ul style="list-style-type: none"> <li>• ANF: Down to 1,960 acres (2.8 percent).</li> <li>• CNF: Down to 6,512 acres (7.8 percent)</li> <li>• LPNF: Down to 32,178 acres (7.6 percent)</li> <li>• SBNF: Down to 1,670 acres (3.3 percent).</li> </ul>	<p>Approximately 24,342 acres (~3.9 percent of project area) of the IRAs would have LUZs suitable for non- recreation special use activities.</p> <p>Acres available for non-recreation special uses by Forest:</p> <ul style="list-style-type: none"> <li>• ANF: Down to 1,438 acres (2 percent).</li> <li>• CNF: Down to 5,417 acres (6.5 percent).</li> <li>• LPNF: Down to 15,817 acres (3.7 percent).</li> <li>• SBNF: Same as Alternative 2. (3.3 percent)</li> </ul>
<b>Mineral Development</b>	See Draft SEIS	See Draft SEIS	See Draft SEIS
<b>Oil and Gas Production</b>	See Draft SEIS	See Draft SEIS	See Draft SEIS
<b>Range Management</b>	<i>Acres Available for Range Management:</i> 224,961 acres within 37 IRAs are currently suitable for livestock grazing and Black Mountain Wild Horse Territory. No changes would occur.	See Draft SEIS	See Draft SEIS
<b>Fuels Management</b> <ul style="list-style-type: none"> <li>• <b>Fuelbreaks</b></li> </ul>	<p><i>Fuelbreaks Suitability:</i> Fuelbreaks are suitable in DAI, BC, and BCMUR. They are allowed by exception in BCNM and RW. Fuelbreaks are allowed under the RACR. However, roads cannot be constructed in support of fuelbreak work in IRAs regardless of LUZ.</p> <p><i>Existing Fuelbreaks in IRAs:</i></p> <ul style="list-style-type: none"> <li>• ANF: 22.7 miles</li> </ul>	<i>Fuelbreak Suitability:</i> Same as Alternative 1.	<i>Fuelbreak Suitability:</i> Same as Alternative 1.

Table 6. Comparison Of Management Practices By Alternative			
Appropriate Uses/Actions	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
	<ul style="list-style-type: none"> <li>• <i>CNF</i>: 7.6 miles</li> <li>• <i>LPNF</i>: 34.3 miles</li> <li>• <i>SBNF</i>: 6.0 miles</li> </ul> <p><i>Maintenance of Existing Fuelbreaks:</i> No change.</p>	<p><i>Maintenance of Existing Fuelbreaks:</i> Overall there would be minimal impact on maintenance of the existing fuelbreaks. ~10 miles of fuelbreaks in RW (mostly on the ANF).</p> <ul style="list-style-type: none"> <li>• The Salt Creek Fuelbreak (Salt Creek IRA on ANF) is accessed from Old Ridge Rd.</li> <li>• Fuelbreak on Red Mountain (Red Mountain IRA on ANF) does not have road access and was last maintained in 1989.</li> </ul> <p><i>Land Use Zones of Existing Fuelbreaks:</i>  BC: 21.5 miles  BCMUR: 5.9 miles  BCNM: 27.6 miles  DAI: 5.4 miles  RW: 10.0 miles  EW: 0.1 miles</p>	<p><i>Maintenance of Existing Fuelbreaks:</i> Effectiveness of fuelbreaks would not change; but cost of maintenance may due to changes in access in RW. Moderate impact on fuelbreak maintenance within IRAs. Use of dozers for maintenance would likely decline with more reliance on less intense treatments.</p> <ul style="list-style-type: none"> <li>• <i>ANF</i>: additional fuelbreaks are Ruby Canyon and Red Mountain Fuelbreaks (Red Mountain IRA). Neither has Forest System road success but is accessible by dozer.</li> <li>• <i>LPNF</i>: Fuelbreaks are in Diablo, Juncal, White Ledge, and Sespe-Frasier IRAs. A few of these have Forest Service system road access adjacent to fuelbreak, most are accessible by dozer from system roads.</li> </ul> <p><i>Land Use Zones of Existing Fuelbreaks:</i>  BC: 17.5 miles  BCMUR: 3.2 miles  BCNM: 7.0 miles  DAI: 5.4 miles  RW: 37.3 miles  EW: 0.1 miles</p>

<b>Table 6. Comparison Of Management Practices By Alternative</b>			
<b>Appropriate Uses/Actions</b>	<b>Alternative 1 (No Action)</b>	<b>Alternative 2 (Proposed Action)</b>	<b>Alternative 3 (RW Emphasis)</b>
<b>Fire Suppression</b>	<p><i>Fire Suppression Access:</i> No change in current land use zones and no impact on fire suppression effectiveness.</p> <p>The notion that wilderness designation makes fire suppression more difficult is not based on fact. See LMP FEIS Appendix M Response to comments. The current protocol to obtain permission to use mechanized equipment to suppress wilderness fires is not a time consuming process or significant barrier to fire suppression efficiency.</p>	<p><i>Fire Suppression Access:</i> There is no change in road access; thus, no change in fire suppression effectiveness. No change in LUZ for county or Forest Service system roads. ~1mile of permitted roads would shift to BCNM or RW in Alt 2 and use of road would continue under prior existing rights.</p>	<p><i>Fire Suppression Access:</i> Similar to Alternative 2. No changes to LUZ allocations for most county and Forest Service Roads. The one exceptions is listed below:</p> <ul style="list-style-type: none"> <li>• Cedar Creek Road would become RW. Access for fire suppression equipment would be reduced if this road was in RW.</li> </ul>

<b>Table 7. Comparison of Monitoring Alternatives</b>			
<b>Issue</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>
Monitoring Strategy	Three part approach. Part 1 focuses on monitoring effects of management relative to plan objectives. Part 2 reports accomplishment. Part 3 monitors implementation of LMP standards at the project level based on a 10% sample.	Similar to current monitoring. Part 1 focuses on monitoring effects of management relative to plan objectives, with indicators updated for current metrics. Part 2 reports accomplishment. Part 3 monitors implementation of LMP standards at the project level based on a minimum of one project per category.	Maintain three part strategy with more use of baseline inventories using a sampling approach. Part 1 focuses on monitoring effects of management relative to plan objectives, with indicators updated for current metrics. Part 2 reports accomplishment. Part 3 monitors implementation of LMP standards at the project level based on a 20% annual sample of new projects and 20% sample of ongoing projects.
Part 1 Monitoring 5 Year Cost	\$120,620	\$170,940	\$403,300
Part 2 Monitoring 5 Year Cost	\$1,850	\$1,850	\$1,850
Part 3 Monitoring Annual Cost	\$52,910	\$19,240	\$241,980
Efficiency	Some impacts on other appropriated funds for wildlife, botany and watershed to support monitoring.	Annual monitoring within agency funding levels. Some impact to other funds for 5 year monitoring.	Monitoring supplemented by other appropriated funds that would otherwise support goods and services throughout all resource areas.



## **PART II: GENERAL BOTANY REPORT**

### **II-1.0 – INTRODUCTION**

Part II addresses impacts and concerns regarding vegetation, plant communities, and impacts that are common to those species as well as special status species that are discussed in depth in Parts III, IV, and V of this document.

The purpose of Part II is to generally describe plant species, vegetation communities, and habitats in the analysis areas as well as to document the types and degree of potential effects from the alternatives.

### **II-2.0 – EXISTING ENVIRONMENT**

#### **II-2.1 – Existing Environment - Forest Management Practices and Uses**

The Final EIS for the LMP contains detailed discussions of the types of forest management practices and uses on the four southern California National Forests (USDA Forest Service 2006. FEIS-Volume 1, pp. 83-312). The following discussion summarizes the detailed discussion in the FEIS. The FEIS discussion is incorporated by reference.

*a) Biological and Heritage Resources Management Programs:* The National Forests are responsible for managing habitat for all wildlife, fish, and plant resources, as well as protecting and managing all heritage resources. The management of Threatened, Endangered, and Sensitive species is emphasized in all LUZs, which means planned activities should be neutral or beneficial to the species. However, in order to address some issues/conflicts, such as community protection, management activities can result in short-term negative effects to species. However, the long-term consequences of biological and heritage resources management activities/actions are expected to be beneficial to listed species. In addition, program emphasis is to restore degraded habitats and imperiled populations using a variety of strategies and to maintain and enhance landscape linkages for the movement of wildlife.

Specific activities related to habitat restoration include: revegetation (also mentioned under the roads and trails programs), installation and maintenance of wildlife water systems, habitat protection through placement of barriers (*e.g.*, fencing, logs, rocks, etc.), education/interpretation (*e.g.*, talks, guided walks, installation of signs), disguise and rehabilitation of unauthorized off-road driving tracks or other habitat damage, removal of trash, removal of user-created impoundments in streams (*e.g.*, rock dams), and re-introductions of native species (*note*: large-scale tree planting is a site-specific vegetation management project). In many cases, it is important for habitat restoration activities to occur immediately after a problem is identified. In particular, where new vehicle tracks are located off of system roads, immediate disguise and blocking of tracks can prevent further incursions or more significant damage from occurring.

Some of the Forests have ongoing restoration programs tied to the OHV route network. This program includes activities such as collection of native species seed, greenhouse propagation,

out-planting into disturbed sites, and restoration of unauthorized and/or degraded areas along the green sticker routes.

Activities relative to management of biotic resources include monitoring populations, inventorying and monitoring habitats, and projects, plant and animal collecting, photography, interpretation, and research. This includes the issuance of Forest Service permits for collections of plants and animals (in some cases, these collectors also carry State permits) for research and education. Occasionally, this program may involve the capture of individual animals to temporarily move them out of harm's way.

It is Forest Service policy regarding wildlife and fish stocking and introductions to coordinate with respective state agencies to ensure that stocking and introduction efforts on NFS lands do not compromise Federal interests, such as compliance with the ESA and the Wilderness Act (FSM 2641). The MOU between the Forest Service and CDFG establishes CDFG as the lead agency for introduction, stocking, and translocation projects, and states that these projects would be planned and conducted to avoid adversely affecting NFS resources. The MOU further establishes a process to reach joint agreement on these projects at the local level and a resolution process in cases where such joint agreement cannot be reached.

The National Forests work with CDFG, using the process identified in the MOU, to ensure that additional introductions and stockings do not adversely affect listed species. In areas where fishing opportunities exist and are compatible with native species, the National Forests cooperate with the CDFG to promote this recreational opportunity.

Routine operations for Threatened and Endangered species management are done within the limits of Forest Service held USFWS-issued permits and include surveying for presence following appropriate protocol methods, population monitoring, monitoring rehabilitation sites, and scientific research (*e.g.*, collecting data on species-habitat relationships).

Heritage resources (defined as cultural, historical, archaeological, ethnographic, and tribal) represent past human activities or uses and, by their nature, are considered an irreplaceable and nonrenewable resource if not managed for preservation over the long-term. The heritage resources management program involves surveys for and protection of significant heritage resource sites as well as maintaining relationships with Native American groups so that they can exercise and retain traditional connections to the land.

The National Historic Preservation Act of 1966, as amended (NHPA), provides the legal foundation requiring the SBNF to manage and protect heritage resources. How the National Forests manage heritage resources is further defined in 36 Code of Federal Regulations Section 800 (36CFR800), as well as the *First Amended Regional Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region* (PA). These regulatory guidelines require consultation between the National Forests, the California Office of Historic Preservation (SHPO), and Tribal governments (Tribes) for every proposed undertaking that occurs on NFS lands.

Activities associated with the heritage resources program include historical research and documentation; historic architectural analysis; surface inventories and subsurface “shovel-testing” to locate archaeological deposits; evaluative testing and data recovery involving larger-scale excavations; site monitoring; interpretation and public education; records maintenance; historic property preservation, rehabilitation and restoration; as well as historic and prehistoric site protection using many of the same methods as described above for biological and botanical resource sites (*e.g.*, fencing, barriers, etc.).

Of these, the only activities that have the potential to affect botanical resources are shovel testing, evaluative testing and larger-scale excavations. Evaluative testing and large-scale excavations are rare occurrences and are typically implemented in response to a prior impact to the resource. Shovel-testing occurs during archaeological inventory and constitutes a greater potential to affect plant species.

*b) Invasive Species Management Program:* This program includes surveying for the early detection of non-native plant and animal species in order to contain and control them, monitoring known occurrences (including those that have been treated), and treating (or re-treating) occurrences. Most of the activities involving removal of non-native plants involve little ground disturbance. Treatment activities include direct removal of weeds by hand, by using a “weed wrench” for larger non-native shrubs, or by cutting (with hand-tools or with a chainsaw). Activities may also include use of herbicides at administrative and developed sites (as allowed under Categorical Exclusion rules) and other locations across the Forest.

Non-native plant removal may include manual removal and/or the use of herbicides. Focused ground based application methods such as low volume foliar-spraying, cut and daub, basal bark, or frill methods of herbicide application may be used depending on which technique is preferable given the herbicide, the species, and conditions.

In addition to removal of non-native plants, this program can include the removal of non-native animals (*e.g.*, feral dogs, goldfish, bullfrogs, etc.). These activities generally do not result in ground disturbance but are accomplished through trapping or electro-shocking techniques.

*c) Recreation Management Program:* The recreation management program includes developed and dispersed recreation uses of the NFS lands. Developed recreation includes family and group campgrounds, day use (picnic) areas, yellow post-sites, trailheads, visitor centers, and fire lookouts. Some of these sites are administered through concessionaires while others are managed by the Forest Service. Management of these facilities include operation and maintenance/minor repair of internal site roads and buildings, trails, boundary fencing, picnic tables and fire rings, restrooms, water systems, dumpsters, regulatory signs and bulletin boards, barrier logs, camp host sites, concrete parking slabs, and interpretive panels in addition to administration of the site visitors. Herbicides and pesticides may be used in developed sites.

Hazard trees within falling distance of recreation sites are routinely felled and/or removed to provide for public safety. When in rare species habitats, the trees are generally felled but not removed to avoid habitat disturbance and promote habitat qualities for the species (*e.g.*, if the

large woody debris is important for contributing to habitat quality or if equipment use would result in habitat damage).

Dispersed recreation includes (but is not limited to) camping outside of developed sites, recreational target shooting, cross-country skiing, snow-play, mountain-biking, horseback riding, hiking, nature exploration, rock climbing, hang gliding, hunting, fishing, and water-play.

Management direction for recreation is to provide a wide range of environmentally-sustainable developed and dispersed recreation opportunities with a shift towards day-use activities, and to expand the interpretive services program and activities.

Dispersed campsites must be at least 200 feet away from meadows, roads, water, and trails. The LMP requires campers to park vehicles on roads instead of pulling off into undisturbed areas. Campfires are not allowed outside of developed campsites.

Recreational target shooting is managed in several ways. Some Forests only allow target shooting in a few small designated areas; others have few or no restrictions on where target shooting may occur. There are some target ranges and gun clubs operated under Special Use Permit. Hunting is legal in most parts of the National Forests with restrictions determined by the respective County and CDFG.

Activities relative to recreational use of wildlife and plant resources include photography, interpretation, fishing, hunting, wildlife viewing, bird-watching, etc. Collection, fishing, and hunting are regulated by CDFG. Managing game populations, setting legal limits, enforcement, and administration is the responsibility of CDFG.

*d) Road and Trail System Program:* The use and maintenance of the transportation system (including roads, motorized vehicle trails, and non-motorized trails) involves a number of activities. Although the use of the transportation system overlaps with the Recreation program, the evaluation of the potential effects of use is discussed in the Road/Trail System program.

*Motorized Roads:* For public use, and to administer and protect resources, roads must be periodically reconstructed and maintained. Some roads may be constructed for specific resource outputs and recreation use, and some roads may need to be reconstructed over time to make needed improvements in alignment, grade, width and drainage. The designated road system on the National Forests is generally open to the public. The Forest Supervisor has the authority to institute road closures and reopening of closed roads for resource protection, fire emergencies public safety, etc. Ongoing activities include use of roads by green-sticker vehicles (on those roads designated for mixed use), street-legal vehicles (e.g., 4-wheel drives, sedans, etc.), road maintenance, minor road construction or re-construction, general vehicular use, and group events. Ongoing road maintenance includes brushing (trimming of trees and shrubs) along road prism to ensure that visibility for drivers is not hindered.

Road maintenance (as defined in Forest Service Handbook 7709.58-95-1) includes any expenditure in the repair or upkeep of a road necessary to retain the road's approved traffic service level. Work items may include surface rock replacement, seal coats and asphalt overlays,

bridge replacement, slide removal, and other items that contribute to the preservation of the existing road. Road maintenance is not intended to substantially improve conditions above those originally constructed; however, there may be a need for adding to or modifying the original conditions without increasing the traffic service level. Typical examples of these activities include installing additional minor culverts and traffic control devices, implementing traffic management strategies, placing small quantities of spot surfacing, and re-vegetating cut and fill slopes, and blocking and/or disguising unauthorized routes originating on or crossing system routes.

Some roads may be allowed to deteriorate gradually over time. For example, a road may need to be operated and maintained at a higher level during periods of commercial use than is required at other times.

Other road maintenance situations may require that the road be stabilized to preserve the road structure and/or to reduce erosion and then closed (maintenance level 1) between use cycles. Some maintenance work activities may be deferred while the road is in a planned disinvestment or a closure cycle.

This work may be accomplished at some future date through maintenance or reconstruction, depending on complexity and extent. Opening a closed road is normally considered maintenance. Work performed to raise its traffic service level above that originally constructed is considered to be road reconstruction. Obliterating and/or returning a road to resource production is not considered maintenance.

Road reconstruction involves either improvement of an existing road to a higher standard, or improvement of a badly deteriorated road to its previous condition.

Where roads/trails are no longer needed or cannot be maintained, the Forest Service may remove them from the Transportation System. This involves removal from maintenance schedules and from maps and, in some cases, may involve some on-site activities such as decompaction, blocking, barricading, installation of water bars, removal of culverts, etc. Decommissioning of roads is also an ongoing activity.

*Non-Street-Legal Vehicle Routes:* Management direction is to provide for off-highway vehicle (OHV) opportunities compatible with other recreation activities and resources through development of a designated system of routes. Activities include use of routes by State-certified non-street-legal vehicles, special events, route maintenance, and route construction or reconstruction. Vehicles and drivers not licensed for highway use are restricted to specific designated route systems. There are also several snowmobile routes designated on the National Forests.

Timing of the OHV routes generally takes advantage of available soil moisture, but seasonal and elevational differences allow trail maintenance to be done year-round depending on site. Maintenance of OHV routes consists of tread maintenance (loose rock removal, rock and root removal, slough and berm removal, slide maintenance, and grooming of the tread surface), drainage maintenance (maintenance of water bars, rolling dips, culverts, French drains and other

water control/diversion devices), maintenance of water and gully crossings, route maintenance (removal of fallen logs, brushing along trail prism, removal of hazard trees (see separate discussion below), litter removal, slope revegetation, and closure/restoration of off-route impacts), structure maintenance (barriers, barricades, retaining walls, trail tread protection measures, cattle guards, fences, and gates), and traffic services (sign repair and installation). Maintenance scheduling has been done on an as needed basis.

*Non-Motorized Trails:* These trails provide access and use of NFS lands by hikers, equestrian riders, and mountain bikers. Maintenance of the trail system occurs yearly though not on all trails each year and includes activities similar to those described in the above motorized route discussions.

Activities include use of trails by horses, hikers, and/or mountain bikes, trail maintenance, and trail construction or reconstruction. All trails (except the Pacific Crest National Scenic Trail and those trails within wilderness areas) allow mountain bike use as well as hiking and equestrian use. Pack animals (*e.g.*, mules, donkeys, llamas, etc.) may be also used by visitors. In some cases, outfitter-guides (under Special Use Permit) may use pack animals.

*Hazard Tree Removal:* Dead or dying trees and/or hazard trees within falling distance of roads and trails are routinely felled and/or removed in order to provide for public safety. When in rare species habitat, the trees may be felled but not removed (*e.g.*, if the large woody debris is important for contributing to habitat quality or if equipment use would result in habitat damage).

*e) Range Management Program:* The four southern California National Forests administer a number of cattle grazing allotments that are operated by permittees. Additionally, there are several wild horse and burro territories where burros or horses roam freely on NFS lands. There is one wild burro territory on the SBNF and one wild horse territory on the LPNF. Activities associated with these programs include periodic censuses of the herds, maintenance of developed springs/water sources, exclusion fences in sensitive areas, and occasional collection of burros that have strayed outside the territory or have been injured.

*f) Special Use Permit Program – Recreation and Non-Recreation:* The Recreation and Non-Recreation Special Use Program provides for authorized occupancy and use of NFS land under Special Use Permits (SUPs). The Recreation Special Use program consists of permits for concessionaires, winter sports, recreation residences, organization camps, and outfitter-guides activities. Non-Recreation Special Uses include permits for utilities (gas lines, sewer lines, water lines, powerlines, etc.), communication sites, water developments (extractions and diversions), transportation (state highways, private roads, etc.), land use (authorized encroachments), filming and commercial photography, etc.

The Forests also receive frequent requests for Special Use Permits to hold recreation special events/activities (*e.g.*, motorcycle enduros, jeep tours, jeep jamborees, weddings, group events, fund-raising runs/walks, etc.) on Forest system roads, trails, and at developed sites.

*g) Lands Program:* LMP direction is to continue to acquire lands to enhance biodiversity, habitat linkages, and rare species. The only specific activities that are not project-related are

surveys and marking of property boundaries. Surveys typically involve one or two people with surveying equipment. Boundaries are typically marked with fence posts, tags nailed to trees, or buried aluminum pipe with information caps. Occasionally important corner posts or survey monuments must be set in the ground with concrete.

*h) Water Use for Wildland Fire Suppression:* Wildfire suppression activities are considered emergency actions. However, the practice of obtaining water via helicopters or fire engines is somewhat predictable at certain sites.

Forest Service biologists and botanists coordinate with fire suppression/prevention staff and provide maps of T/E occurrences (including those in this evaluation) and guidelines on how to minimize impacts during fire-fighting efforts. When fires occur in sensitive areas, the District Ranger typically provides the Incident Commander (IC) with a “Resource Advisor”. The Resource Advisor works with the IC to identify sensitive resources (including listed species occurrences) and to avoid impacts. When fires occur within wilderness, a “Wilderness Advisor” is generally assigned and use of Minimum Impact Suppression Techniques (MIST) is encouraged.

Drafting of water for fire suppression may include building small temporary “dams” in streams and/or digging out a pool to collect water for ease of suctioning water into water tenders or water storage tanks. Heli-dipping or heli-drafting involves a helicopter hovering over a pond or lake and extending a bucket or suction device into the water.

*i) Forest Products Harvesting:* Activities under this category include but are not limited to firewood collection of dead and down logs and by-products of timber sales, as well as the harvesting of such forest products as branches of various shrubs (mountain mahogany, ceanothus, oak, manzanita, etc.), cone collections, seed collections for commercial purposes, and the harvesting of bracken ferns fiddleheads.

The Forests issue occasional permits for seed collecting to commercial native-plant propagators. Permit provisions and collection location guidelines limit collecting in vulnerable habitats in addition to prohibiting collection of rare species. Whole plant collecting is not permitted except for research purposes (covered under the Biological Resources management section).

Members of recognized tribes also have the right to harvest traditional materials (*e.g.*, deer grass, willows, acorns, pinyon pine seeds, etc.) without a permit. While the Forest Service can request that they coordinate with us to identify collection sites and methods that avoid potential impacts to Sensitive species and habitats, this activity can occur without any coordination or guidance.

Some of the Forests have an active personal use firewood program. Under this program, members of the general public may purchase permits for cutting up firewood for personal use. The rules regarding cord limits and collection areas vary by district.

In addition to permitted activities, there is an un-quantified level of illegal firewood cutting and gathering occurring on the Forest. Illegal cutting includes removal of green living trees as well

as cutting in areas closed to woodcutting. The illegal activities themselves are not predictable nor under the control of the Forest Service.

LMP management direction is to achieve favorable conditions for wildlife and fish, recreation and fuels management, and utilize the by-products to provide wood products for commercial and individual use.

j) Law Enforcement Program: A wide variety of illegal and unauthorized activities occur on NFS lands. These activities include marijuana cultivation, drug labs, trash dumping, OHV use off of designated roads and trails, wood theft, arson, destruction of facilities and natural resources, poaching, etc. The illegal activities themselves are not predictable nor under the control of the Forest Service.

However, the law enforcement program itself does have some predictable activities. These include reconnaissance efforts to locate marijuana plantations and other illegal activities, surveillance, removal of marijuana plants, water piping, water diversions, trash, and encampments, etc. Areas with habitat suitable for marijuana cultivation, especially near riparian zones and water sources, are surveyed with helicopter flights during the growing season and surveillance efforts are established.

The standard height for reconnaissance flights is 500' above-the-ground. When flights are conducted by Jet Ranger or similar helicopters at this height, rotor wash of vegetation generally does not occur in riparian areas. However, when flights are done by military cooperators in Blackhawk helicopters, rotor wash occurs and noise levels are very high.

In recent years, poisons for mammals (including some extremely lethal types not legal in the U.S.) are increasingly being discovered at marijuana plantations. Law enforcement activities may involve clean-up of those hazardous materials.

Biologists and botanists coordinate with law enforcement staff and provide maps of T/E occurrences (including those in this evaluation) so that if illegal activities are located in those areas, the law enforcement staffs know to coordinate with the appropriate biologist or botanist.

k) Administrative Infrastructure: Administrative facilities include developed recreation areas, roads, trails, dams, and buildings. Developed recreation areas, roads, and trails are covered under separate headings. Most of the facilities and utility systems are over 35 years old and in need of continuous repair and maintenance. These facilities range in size from large warehouses to ranger stations, fire stations, and small equipment storage buildings.

The Forest Service also has dams that are maintained for a variety of purposes including provisions for recreation, wildlife habitat improvement, and watershed protection.

Activities include routine maintenance to protect and preserve facilities, and a minor reconstruction to replace or rehabilitate outdated facilities. Dead or dying trees and hazard trees within falling distance of administrative facilities are routinely felled and/or removed in order to provide for public safety. When in T/E habitat, the trees may be felled but not removed (e.g., if



the large woody debris is important for contributing to habitat quality or if equipment use would result in habitat damage). Herbicides and pesticides may be used in administrative sites.

## **II-2.2 – Existing Environment - Vegetation Communities**

The “Coastal Foothills Landscape” generally occurs below elevations of 3,000 feet on coastal-facing slopes, although it reaches well inland on LPNF. Topography is usually steep where chaparral dominates but tends toward rolling foothills and valleys where oak woodlands, coastal sage scrub and annual grasslands are prevalent. Coastal vegetation types include coastal sage scrub, coast live oak and Engelmann oak (*Quercus engelmannii*) woodlands and forests and scattered annual grasslands. Inland, blue (*Q. douglasii*) and valley oak (*Q. lobata*) savannas, woodlands and forests are significant components of this landscape.

Wildlife Habitat Relationship (WHR; CDFG -<http://www.dfg.ca.gov/whdab/cwhr/whrintro.html>) types analyzed for this landscape include: chaparral, blue oak woodlands, coastal oak woodlands (e.g. coast live oak, *Q. agrifolia*, and Engelmann oak), blue oak woodland-foothill pine, valley oak woodlands, coastal sage scrub, valley foothill riparian and California annual grasslands.

With regard to fire regime, chaparral and coastal sage scrub typically burn in infrequent (Van de Water and Safford 2011) large-scale, high-intensity fires. The oak types, on the other hand, are more likely to burn in low- to moderate-intensity surface fires carried by the omnipresent herbaceous understory.

The “Lower Montane Landscape” is best developed on generally steep, coastal-facing slopes between elevations of 3,000 and 5,000 feet. Chaparral is the dominant vegetation, but within the shrubland expanses are numerous stands, and occasional well-developed forests, of bigcone Douglas-fir (*Pseudotsuga macrocarpa*), Coulter (*Pinus coulteri*) and knobcone pine (*P. attenuata*) woodlands, canyon live and black oak (*Q. kelloggii*) forests as well as isolated populations of Tecate (*Cupressus forbesii*), Cuyamaca (*C. stephensonii*) and Sargent cypress (*C. sargentii*).

The pines and cypresses experience infrequent, stand-replacing fires and regenerate entirely from seeds stored in closed cones (Borchert 1985, Ne’eman *et al.* 1999). Bigcone Douglas-fir often grows in relatively fire-proof locations (steep unstable slopes, protected canyons) and crown sprouts in response to moderate intensity fires (Minnich 1977). Canyon live oak (*Q. chrysolepis*) and black oak are easily killed by fire but are prolific post-fire stump-sprouters. WHR types represented in IRAs of this landscape are montane hardwoods, montane hardwood-conifer forests, closed-cone pines and chaparral.

With increasing elevation inland from the coast, precipitation increases while winter temperatures decrease. This climate creates conditions for the development of the “Montane Conifer Landscape” which becomes increasingly prevalent at elevations above 5,000 feet, extending up to elevations of 8,500 feet in the San Bernardino Mountains. Jeffrey pine (*P. jeffreyi*) and ponderosa pine (*P. ponderosa*) forests, or a mix of the two species, are important components of this landscape. Mixed conifer forests are situated in moister settings such as north-facing slopes. Large patches of montane chaparral grow on the shallower soils at higher elevations or as early successional patches generated by wildfires. Significant areas of this

landscape are dominated by monotypic black oak and canyon live oak forests that often occur as inclusions in a complex mosaic with other forest types.

Pre-suppression fires in this landscape apparently were frequent (Minnich *et al.* 1995) low- and moderate severity burns with smaller patches of high-severity crown fires. Since 2000, wildfires that have increasingly intense in these forests and have caused significant losses of mature forests in the Cuyamaca (Cedar Fire), San Gabriel (Station Fire) and San Bernardino Mountains (Old Fire). High fuel loadings, resulting from successful fire suppression, combined with warming due to climate change likely will make stand-replacing fires even more frequent in the conifer forests of this landscape (Westerling and Bryant 2008). WHR types represented in this landscape include Jeffrey pine, ponderosa pine, Sierran mixed conifer, white fir (*Abies concolor*), montane chaparral, montane hardwoods and montane hardwood-conifers.

The “Subalpine/Alpine Landscape” occupies terrain above elevations of 8500 feet and is patchily distributed over the province, primarily in the San Gabriel and San Bernardino Mountains. Mountaintops where these vegetation types occur receive substantial precipitation in the form of snow, but because cold temperatures often persist well into summer, the growing season is relatively short. Fires are mostly lightning-caused and infrequent. Subalpine conifer is the WHR type (Van de Water and Safford 2010).

The most arid, interior landscape is the “Desert Montane Landscape”. Singleleaf pinyon (*P. monophylla*) woodlands dominate this landscape across the province but there also are extensive areas of juniper (*Juniperus californica* and *J. osteosperma*) as well as locally abundant Joshua tree (*Yucca brevifolia*) woodlands. Intermixed with pinyon woodlands are shrubland patches of Great Basin sagebrush (*Artemisia tridentata*), rabbit brush (*Chrysothamnus nauseosus*) and occasionally creosote (*Larrea tridentata*). Fires in this landscape are infrequent and usually stand-replacing (Wangler and Minnich 1996). WHR types include sagebrush, desert scrub, desert wash, juniper, eastside pine and pinyon-juniper.

### **II-2.3 – Existing Environment - Botanical Resources**

The four southern California National Forests lie within a bioregion considered by Conservation International to be one of the world’s 25 biodiversity “hotspots”. These are defined as areas where exceptional concentrations of endemic species are undergoing exceptional loss of habitat (Myers *et al.* 2000). High vegetation diversity, unique ecological communities found nowhere else, and exceptionally high numbers of endemic plant species characterize this area (USDA Forest Service 2006).

The four National Forests play an important regional role in maintaining large blocks of wildlife and plant habitat. They also contain areas that are the only remaining habitat refugia for species imperiled by the loss of degradation of habitat off-forest. Combined with a mix of local, state, federal and private lands, they form a regional system of open space and habitat preserves within one of the most highly urbanized landscapes in the United States.

The 37 inventoried Roadless Areas in this analysis play an important role in this regional system by providing habitat for a diversity of species such as wide-ranging carnivores, localized species and Threatened, Endangered and Sensitive wildlife and plant species. Whether managed alone

or in combination with Critical Biological zones and/or special designations such as Wilderness, Research Natural Areas and Special Interest Areas, these IRAs provide biological strongholds that have typically not been exposed to the same levels of habitat degradation and loss that has occurred across other more utilized areas of the National Forests. Native plant and animal communities are generally more intact in these IRAs than in roaded areas of similar size resulting in the presence and abundance of species less likely to be affected by human disturbances. Across the southern California National Forests, these IRAs play a key role in maintaining native species and biodiversity because they provide conditions suitable for survival that are declining elsewhere.

This section of the document addresses existing conditions for all botanical resources that may be present in the analysis area. Detailed discussions of the existing conditions for Endangered, Threatened, and Sensitive species are discussed in Parts III and IV of this document.

#### II-2.3.1 – Existing Environment - Rare Species Occurrences

The four National Forests currently support occurrences and habitat and manage for the recovery for nineteen Endangered and ten Threatened plant species. Additionally, there is designated Critical Habitat for Threatened/Endangered plants on NFS lands. The four National Forests also support occurrences and habitat and manage for 199 plant species designated as Sensitive by the Regional Forester for the Pacific Southwest Region (Region 5).

In addition to the Threatened and Endangered species addressed in Part IV, and the Sensitive species addressed in Part III, the Forest Service botanists have identified other rare plants that lack special statuses but for which there is some concern. Under the National Forest Management Act (NFMA) of 1976, there is an obligation to maintain viability of all native species.

The National Forest Management Act (NFMA) requires the Forest Service to "provide for a diversity of plant and animal communities" [16 U.S.C. 1604 (g) (3) (B)] as part of its multiple use mandate. Forests that have plans developed under the 1982 NFMA planning rule, must maintain "viable populations of existing native and desired non-native species in the planning area" (36 CFR 219.19 Source: 47 FR 43037, September 30, 1982). The USFS Sensitive Species program is designed to meet this mandate and demonstrate a commitment to maintain biodiversity on NFS lands. The program is a proactive approach to conserving species to prevent a trend toward listing under the Endangered Species Act of 1973, and to ensure the continued existence of viable, well-distributed populations.

**Table 8** displays rare plants (not including TES species) known from the IRAs affected by the Proposed Action.

Table 8. Other Rare Plant Occurrences by Inventoried Roadless Area	
Other Rare Plants Known in IRAs	Common Name
<b>Angeles National Forest</b>	
<b>Fish Canyon</b>	
<i>Calochortus clavatus</i> var. <i>clavatus</i> <sup>2</sup>	Club-haired mariposa lily
<b>Salt Creek</b>	
<i>Calochortus clavatus</i> var. <i>clavatus</i> <sup>2</sup>	Club-haired mariposa lily
<b>Tule</b>	
<i>Calochortus clavatus</i> var. <i>clavatus</i> <sup>2</sup>	Club-haired mariposa lily
<b>Red Mountain</b>	
<i>Calochortus clavatus</i> var. <i>clavatus</i> <sup>2</sup>	Club-haired mariposa lily
<i>Lepechinia rossii</i> <sup>2</sup>	Ross's pitcher sage
<b>West Fork</b>	
<i>Juglans californica</i>	Southern California black walnut
<b>Cleveland National Forest</b>	
<b>Trabuco</b>	
<i>Polygala cornuta</i> var. <i>fishiae</i> <sup>1</sup>	Fish's milkwort
<b>San Bernardino National Forest</b>	
<b>Cactus Springs B</b>	
<i>Chaenactis parishii</i>	Parish's chaenactis
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> <sup>2</sup>	Riverside spineflower
<i>Hulsea vestita</i> ssp. <i>callicarpa</i>	Pumice alpine gold, beautiful hulsea
<b>Cactus Springs B New</b>	
<i>Hulsea vestita</i> ssp. <i>callicarpa</i>	Pumice alpine gold, beautiful hulsea
<b>Cucamonga B</b>	
<i>Boykinia rotundifolia</i>	Roundleaf brookfoam
<i>Lilium humboldtii</i> var. <i>ocellatum</i>	Humboldt's lily
<i>Monardella australis</i> ssp. <i>jokerstii</i> <sup>2</sup>	Jokerst's monardella
<b>Pyramid Peak A</b>	
<i>Hulsea vestita</i> ssp. <i>callicarpa</i>	Pumice alpine gold, beautiful hulsea
<i>Washingtonia filifera</i> <sup>1</sup>	Desert fan palm
Data source unless otherwise noted: USFS NRM TESP database 8/30/2012	
<sup>1</sup> Forest botanist provided knowledge in the 2012 IRA SEIS Wilderness Evaluations	
<sup>2</sup> Proposed for addition to the Regional Forester Sensitive species list in 2012. Analyzed as a Sensitive species in this evaluation.	

## **II-3.0 – POTENTIAL EFFECTS - GENERAL**

### **II-3.1 – Potential Effects from Land Use Zone Alternatives**

The following discussion describes potential effects that may be common to the plants or habitats in the IRAs. These discussions also apply to TES species discussed in later sections of this document. Parts of this discussion are referenced later in the document for specific species that are known to occur or have the potential to occur in the affected IRAs.

#### **II-3.1.1 - Assumptions Used in the Analysis**

*Management direction assumptions:* The expected consequences for conservation of plant species at risk and their habitats under each alternative expressed below rely on the assumption that management direction will be implemented consistently across the southern California National Forests under all alternatives and would generally be effective in mitigating impacts. It assumes the following management direction would be included in all alternatives and USFS policy direction updated since the Plan revision would be also implemented:

- Conduct field surveys for species-at-risk early enough in the project planning that the project can be designed to conserve or enhance habitat for those species.
- Mitigate adverse impacts to Threatened, Endangered, proposed and candidate species. Mitigation measures include: (1) avoiding the impacts altogether by declining to take an action or part of an action; (2) minimizing impacts by limiting the degree or magnitude of an action or its implementation; (3) rectifying the impact by repairing, rehabilitating or restoring the affected environment; (4) reducing or eliminating the life of an action; and/or (5) compensating for the impact by replacing or providing substitute resources or environments.
- Forest Service, Vegetation Management Policy (FSM 2060 2/13/2008).
- Forest Service, Ecological Restoration and Resilience Policy (FSM 2020 9/30/2011).
  - R5 Ecological Restoration Leadership Intent (RO letter dated 5/3/2010).
- Forest Service, R5 Soil and Water Conservation Handbook (FSH 2509.22 12/5/2011).
- Forest Service, Southern California NF Supplement to FSH 2509.22 regarding Soil and Water Conservation Practices (LMP 2006).
- Forest Service, Invasive Species Management Policy (FSM 2900 12/5/2011).
- National Forests of Southern California Weed Management Strategy (USDA Forest Service 2006. LMP Part 3, Appendix M).
- Existing and any new biological opinions (BO) (such as terms and conditions for incidental take statements).
- Species and habitat management guides, species conservation strategies, and recovery plans as funding permits.
- Use of species guidance documents to determine potential project effects and develop project-specific conservation measures for Threatened, Endangered, proposed, candidate and Sensitive species, as well as other species-at-risk.

#### *Roadless Area Conservation Rule and Land Use Zone Assumptions*

- The RACR (36 CFR 294 subpart B)
- The Wilderness Act (P.L. 88-577; 16 U.S.C. §§ 1131-1136) explicitly directed that the wilderness designations had no effect on state jurisdiction or responsibilities over fish and wildlife; § 4(d)(8) states that “nothing in this Act shall be construed as affecting the

jurisdiction or responsibilities of the several States with respect to wildlife and fish in the National Forests.” This direction allows agencies such as California Department of Fish and Game (CDFG) to continue to manage wildlife species as necessary even in recommended wilderness or existing wilderness land use zones.

- The Wilderness Act also allows uses, activities, or infrastructure that does not conform to the general prohibitions on commercial activities, motorized access, and infrastructure. Many of these nonconforming permitted uses were explicitly allowed in the Wilderness Act, including access for management and emergencies, as well as activities for continued motorized access, livestock grazing, and water project developments. Subsequent statutes have expanded on these provisions and have addressed additional concerns, such as fish and wildlife management activities, development or maintenance of and access to certain existing and potential infrastructure, and access for other specific purposes (CRS 2011). This is particularly important for actions necessary to protect or recover Threatened or Endangered species “including habitat manipulation and species protection measures, and damage control for non-indigenous species”.
- Recreation would continue on National Forests regardless of land use zoning. However, the type of recreation (*i.e.*, motorized driving vs. hiking) would change as land use zones change.
- No assumptions can be made that recreation would decrease with more restrictive land use zones.
- Likewise, the designations of “recommended wilderness” may not necessary result in any changes in recreation levels in these specific IRAs.
- Recognition that 1) National Forests in southern California are some of the most visited National Forests in the United States, 2) California is one of the most populated states as well, and 3) as the population of southern California continues to expand there would be an increase in the use of southern California National Forests.
- Activities that promote the recovery of species, in particular federally listed species, would be consistent with all land use zoning.

#### Effects Analysis Common to All Plant Species Assumptions

- Special status plant species and their habitats occur across all vegetation types regardless of land use zone (LUZ).
- Critical habitats are designated on National Forests regardless of land use zone.
- The types of activities that are permitted on National Forest system lands as a result of LMP land use zoning can have effects on plant species at risk and their habitats.

As discussed in the Existing Environment section (Part II-2.4 of this document), there are a number of activities that occur on NFS lands. Each of these activities may have effects to vegetation communities, individual plants, habitat conditions (soil, water, shade/sun, etc.), and Primary Constituent Elements (PCEs) of designated Critical Habitat (for T/E species).

The types of potential effects that may occur as a result of these activities/actions are discussed below. The subsequent discussions address these effects in terms of the three alternatives.

### II-3.1.2 – Types of Potential Effects Associated with Forest Management Practices and Uses

The Final EIS for the LMP contains detailed discussions of the effects of forest management practices and uses on the four southern California National Forests to botanical resources (USDA Forest Service 2006, FEIS-Volume 1, pp.313-425). The following discussion summarizes the detailed discussion in the FEIS. The FEIS discussion is incorporated by reference.

#### a) Biological Resource Program Management

Surveys, inventory, and monitoring occurs frequently on NFS lands. It entails driving to and walking through habitat to document the distribution and status of occurrences and to evaluate the effectiveness of protective measures. Potential effects include walking, kneeling or lying on individual plants, which can break stems and crush flowers, reduced reproductive output for the year, or rarely kill individual plants. These effects are limited to a very small fraction of the individuals in any occurrence. Effects of these activities are mostly beneficial, generating information needed to effectively manage, protect, and track the overall status of the species.

Information and education programs entail presenting information to the public with the intent to educate and excite visitors and residents about the resources of the National Forests (including its botanical richness) and management challenges. This information is presented in the form of public talks, nature walks, and signage. A well-informed public is mostly beneficial for resource protection in general, and also specifically for species conservation. However, there remains a possibility that the information may lead to increased public visitation to rare species habitat areas, or an increased possibly of vandalism.

Habitat improvement and restoration projects most often are specifically planned to avoid effects to rare species and Critical Habitat. However, in cases where efforts are being specifically directed at protecting rare species and/or Critical Habitat from other ongoing effects, the protective measures themselves may have effects. Seeds are occasionally collected from rare plants to add to conservation accessions (*e.g.*, Rancho Santa Ana Botanic Garden). While this is a recovery action covered under the 10(a) (1) (A) recovery permits, incidental minor trampling of listed plants in the vicinity of collections may result. Installing barriers (fencing or rock) where a road passes adjacent to or through an occurrence of a rare species, or performing revegetation on an unauthorized route that passes through a rare species occurrence, may result in affects to rare plants. Such effects include crushing, uprooting, and trampling. These effects are limited to a very small fraction of the individuals in any occurrence. Net effects of these activities are beneficial (by design).

The effects of this program, and in particular the beneficial effects, vary depending on budgets, staffing, and capability.

#### b) Invasive Species Management

Effects of non-native species inventory and monitoring to botanical resources are similar to the effects of rare plant inventory and monitoring discussed above. The frequency of inventory and monitoring effects is variable and dependent upon the specific circumstances of the non-native species occurrence. Potential effects include walking, kneeling or lying on individual plants, which can break stems and crush flowers, reduced reproductive output for the year, or rarely kill individual plants.

Mechanical treatment of non-native species can result in trampling, crushing or uprooting of adjacent individual non-target plants, or effects to Primary Constituent Elements of Critical Habitat (*e.g.*, very localized excavation). Chemical treatment (*i.e.*, herbicide) has the potential to adversely affect individual non-target plants through inadvertent overspray, drift, or accidental spill. Any of these may kill exposed plants through the chemical effects of the herbicide. Application of herbicides is usually not broadcast sprayed from a truck or airplane. It is directly applied to individual plants so the amount herbicide used is very small. Also, applications are only performed under the supervision of a Qualified Applicator and follows strict requirements. Such effects are unlikely based on application requirements, and in any event limited to a very small fraction of the listed species individuals in any occurrence, and to very small portions of Critical Habitat areas.

Effects of these activities are mostly beneficial to non-target botanical species, as the intent is detect, monitor and ultimately to eradicate any non-native species that pose a threat to native plant communities. The effects of this program, and in particular the beneficial effects, vary with budgets, staffing and capability.

#### *c) Road and Trail Management*

NFS roads accommodate all types of street legal motorized vehicles (*e.g.*, trucks, sedans, 4-wheel-drives, 2-wheel-drives, motorcycles). NFS trails include motorized trails (narrower width than roads, designed to accommodate motorcycles and/or quads) and non-motorized use trails (hiking, equestrian, mountain biking).

Wherever roads and trails exist are potential effects to botanical resources in the vicinity. The likelihood, frequency, and severity of these effects are widely variable and site-specific. However, the activities that lead to these effects, and the descriptions of these effects themselves, are generally consistent across the landscape and among species. Activities include public use, administrative use, maintenance, and minor reconstruction.

Use of roads and trails may result in crushing or uprooting individual plants where they have colonized the road bed or road shoulder. PCEs of Critical Habitat may be affected through soil disturbance (displacement or compaction) within the road prism.

Maintenance or minor reconstruction of road beds and trail tread, including resurfacing, blading, grading, and work with hand tools, may result in burial, crushing or uprooting individual listed plants where they have colonized the road bed or road shoulder. PCEs of Critical Habitat may be affected through soil disturbance (displacement or compaction) and vegetation reduction (*e.g.* trimming encroaching vegetation) within the road prism.

Maintenance and minor reconstruction may also include cleaning, construction or reconstruction of drainage features, including rolling dips, lead-outs, over-side drains, and culverts. These activities may affect individual plants and PCEs of Critical Habitat, localized to drainage features but both on and off the road/trail prism. They may be large in scale and implemented through use of heavy equipment, or small and implemented through non-mechanized hand work. These activities may result in crushing or uprooting individual plants where they have colonized the road bed, road shoulder, or where they occur off the road or trail within the reach of effects of draining features.



PCEs of Critical Habitat may be affected through soil disturbance (displacement or compaction) within the road prism and at the sites of drainage features.

Roads affect water flow and drainage across the landscape, resulting in altered sedimentation and erosion patterns. Some areas may receive additional water, some less. Sedimentation can bury plants and erosion can remove soil and uproot plants. Drainage features associated with roads and trails (and the maintenance thereof) may also have beneficial effects by reducing sedimentation and erosion, controlling effects away from botanical or other sensitive resources, and reducing the likelihood and frequency of road/trail failure and associated need for reconstruction.

Roads and trails have effects related to wildfire. Points of ignition of human-caused wildfires are often along roads or trails. Roads and trails are also often used by firefighters as lines of wildfire containment, which itself involves a complex suite of beneficial and adverse effects on a range of timescales.

Roads and trails are sources of dust. Increased use results in increased deposition of dust on adjacent vegetation and properties of the road bed or trail tread. Maintenance can increase or decrease dust depending on techniques and also on properties of the road bed or trail tread. Dust can reduce photosynthesis and respiration by coating leaves and clogging stomata. Dust can also reduce sexual reproduction by coating stigmas and blocking pollination.

Roads and trails are also common points of origin of weed infestations, and vectors for their spread. Maintenance activities can be the source of new infestations, as seeds from other sites can readily stick in heavy equipment. Equipment washing requirements for contractors offsets this risk. Weed seed can also be introduced to roads and trails by motorized vehicle tire treads and wheel wells, horse droppings, and shoe laces. Regardless of source, periodically or chronically disturbed linear features like roadsides and trail margins are ideal corridors for the introduction and spread of non-native species. Early detection is more likely to occur along roads and trails, reducing the weed risk inherent to roads and trails to a limited extent.

Unauthorized routes (roads and trails not on the National Forest Transportation System or otherwise authorized for public use) have all the adverse effects of system roads and trails use, but none of the effects of maintenance (adverse or beneficial). Unauthorized routes result in additional adverse effects because they are unplanned and unmanaged (and pass through sensitive areas that might have been avoided if the road location had been planned), and they tend to proliferate over time. Use of these routes where they intersect listed plant occurrences results in crushing and uprooting individual plants, and compaction of soil. The proliferation of these routes results in habitat loss, degradation, and fragmentation of botanical resources. Unauthorized routes are not engineered and are therefore more likely to fail and create a broader reach of effects to botanical resources through soils and hydrology effects (erosion and sedimentation).

The majority of unauthorized route networks originate at system roads and trails, though some do originate from private land, County roads or State highways. Even though for the purposes of this document, unauthorized routes and their associated effects are considered as having potential effects of roads and trails program management, they are actually a complex mess influenced by many

factors including system roads and trails, land ownership boundaries, historic uses, dispersed recreation uses, fuel-wood gathering, hunting, and special uses.

#### d) Recreation Program Management

While there are very few places of the four southern California National Forests that are not touched to some extent by recreational activities, effects are concentrated along/near roads and trails, unauthorized routes, the developed area interface, and developed recreation sites. The likelihood, frequency, and severity of these effects are widely variable, related to type of use, and site-specific. However, the activities that lead to these effects, and the descriptions of these effects themselves, are generally consistent across the landscape and among species. Activities include dispersed public uses, public use of developed sites and recreation facilities, and maintenance of developed sites and recreation facilities.

Areas at and near developed recreation facilities (*e.g.*, campgrounds, day use areas, trailheads, etc.) receive such frequent and concentrated use, any habitat is heavily disturbed and long-since unoccupied.

Dispersed camping, biking, equestrian, and hiking uses can result in trampling, crushing, and uprooting of individual plants. The severity of effects is tied to frequency and activity. Where these uses occur frequently in the same areas or along the same routes, compaction, hydrological effects, and general habitat loss may result.

Increased/concentrated dispersed recreation near developed recreation sites is a potential effect of maintenance and use of developed sites. The developed sites are a common origin from which various dispersed uses radiate.

The risk of non-native species introduction and spread is elevated as a function of ground disturbance.

The risk of wildfire starts increases with recreation use, especially dispersed camping with campfires, unauthorized discharge of firearms, and engaging in any form of dispersed recreation activity while smoking. Wildfire suppression (dozer line construction, etc.) may lead to impacts to botanical resources. Too-frequent fire can result in type-conversion of vegetation and increase in prevalence of non-native species (*e.g.*, cheatgrass).

#### e) Special Use Administration

Special uses are activities and facilities authorized under a special use permit (SUP). There are two categories: recreation SUPs and non-recreation SUP.

*Recreation Special Uses:* Recreation SUP activities include events, gatherings, outfitter guiding services, recreation residences, organizational camps, ski areas, snow play areas, cross-country skiing areas, marinas, etc.

Events limited to designated open system roads and trails generally have the same effects to botanical resources as ongoing public use of these roads and trails (see description under Road and Trail Management Program, above). Events limited to developed recreation sites have the same

effects to botanical resources as ongoing public use of these sites (see description under Recreation Management Program, above).

Ski areas and organization (youth) camps are areas developed for specific uses, each with site-specific effects to botanical resources. They result in concentrations of large groups of people. Areas directly around facilities and buildings generally lack ground vegetation due to compaction and trampling. Associated effects occur in the vicinities from hiking, etc. by users exploring from the camps. Recreational residence tracts have similar effects, generally on a smaller scale.

*Non-Recreation Special Uses:* Non-recreation SUP activities/facilities include utility, power, and transportation corridors, wind and solar energy developments, dedicated-use roads, water developments/extractions, etc.

Use and maintenance of SUP roads have the same general effects to botanical resources as open National Forest Transportation System roads (described under Road and Trail Management Program, above), but vary widely in frequency and severity of effects from road to road. Many SUP roads, including utility access, private land access, organization camp access, are gated and not open to public motorized travel. These have the same general effects as gated administrative-use-only NFS roads. County Roads and State Highways typically have higher usage than open NFS roads. These roads are nearly all paved and typically have a lower incidence of motorists venturing off the road, lower sediment input to watercourses, higher risk of hazardous materials spills, and more frequent maintenance.

Water diversions, developments, and extractions under SUP can result in altering water courses and hydrology to the point that some plants can no longer persist on a particular site.

Solar and wind energy developments can result in large areas denuded of vegetation, changes in micro-climates and habitats, and high levels of disturbance and activity. All of these can change the quality and quantity of botanical resource presence and diversity on sites.

#### f) Administrative Infrastructure

The effects of administrative infrastructure (e.g., ranger stations, fire stations, etc.) to botanical resources are similar to those described above for developed recreation sites.

#### g) Livestock and Range Management

This program includes permitting and administering cattle grazing allotments and management of wild horse and burro territories.

Effects of range management may include trampling, eating, and uprooting individual rare plants and impacts to soil structure caused by cattle, horses, or burros walking through habitats when soils are wet and soft. Riparian areas and areas around water sources may have concentrations of effects. Where long-term use and concentration occurs, there may be changes to hydrological functioning (due to rutting, erosion, sedimentation, etc.).

#### h) Forest Products Harvesting/Gathering

Harvesting and gathering of forest products may affect botanical resources. This program includes personal-use fuel-wood gathering, commercial gathering of miscellaneous products (*e.g.*, manzanita, seeds, ironwood, yucca poles, etc.). Other forest products are either personal use amounts (generally less than a grocery bag full) of products like pinecones and mistletoe.

Effects of this program include trampling and uprooting of individual plants, burial of plants in sawdust or slash (left-over smaller branches, leaves, etc.), and the associated effects on these microhabitats resulting from ground disturbance and surface organic material. This may render localized patches of habitat less suitable or unsuitable for plants to persist or recover in the near-term.

#### i) Minerals Management

The general effects of mining activities that fall under the 228.4 NOI exceptions are basically the effects of localized digging and trampling. Listed plants may be uprooted, buried, or crushed. Soil seed banks may be disrupted. Microhabitat conditions and associated species may be altered or displaced. Subsequent erosion or sedimentation may result in further loss of plants and habitat elements. Disturbed soils associated with mining, including such small-scale mining, are at risk of introduction and spread of non-native species. These effects are typically localized, but can be severe and very long-lasting. These mining methods have been used for over 150 years, and 19<sup>th</sup> century diggings similar in scope to contemporary diggings remain apparent in many places. Also, since claimholders and prospecting clubs periodically revisit the same mining claims, the effects can be chronic with return frequencies ranging from annually to weekly (but may not be year-round in areas with limited winter access).

#### II-3.1.3 –Background Information for Effects Analysis

The environmental consequences to botanical resources, including botanical biodiversity and rare species, were analyzed for the four southern California National Forests LMPs (USDA Forest Service 2006, FEIS Volumes I-II). The Record of Decision for each of the four southern California National Forests states that the planning process involved projections regarding the distribution and abundance of ecological conditions needed to maintain viable populations of species well distributed throughout their range (across the entire four National Forests planning area) over the next 50 years.

Design criteria and other guidance (USDA Forest Service 2006, LMP-Part 3) and Forest-specific standards (USDA Forest Service, LMP-Part 2) of the LMPs addressed the risk factors to provide biological conditions for species diversity and persistence in southern California. The adaptive management philosophy that was the basic concept for the revised LMP facilitates the incorporation of information as it continues to evolve so that it can be brought to bear on management activities, including project-specific, in a timely manner.

The 2006 Record of Decision (ROD) for the four southern California National Forests LMPs states that the selected alternative is expected to maintain the diversity of plants in the planning area (USDA Forest Service 2006, RODs). Thus, the basis for this analysis of botanical resources, biodiversity, and rare plants is the 2006 LMP ROD.

In addition, new information acquired and new regulations in effect since the 2006 ROD will also be addressed and analyzed as appropriate. Like the LMP revisions, the analysis for the IRA proposed action will be conducted as a broad program-level rather than a focused analysis project level analysis.

New information and changes in regulations and direction since the 2006 ROD include:

- Newly located occurrences or records of TES, other rare plants, and non-native invasive plants.
- New understandings of life history or biological needs for species.
- Losses or degradation of known occurrences of botanical resources.
- Forest Service, Vegetation Management Policy (FSM 2060 2/13/2008).
- Forest Service, Ecological Restoration and Resilience Policy (FSM 2020 9/30/2011).
  - R5 Ecological Restoration Leadership Intent (RO letter dated 5/3/2010).
- Forest Service, R5 Soil and Water Conservation Handbook (FSH 2509.22 12/5/2011).
- Forest Service, Southern California NF Supplement to FSH 2509.22 regarding Soil and Water Conservation Practices (USDA Forest Service 2006. LMP).
- Forest Service, Invasive Species Management Policy (FSM 2900 12/5/2011).
- Existing and any new biological opinions (BO) (such as terms and conditions for incidental take statements).
- Species and habitat management guides, species conservation strategies, and recovery plans as funding permits.

#### II-3.1.4 – Potential Effects to Botanical Resources from Non-Native and Invasive Species

Part V of this document includes a more detailed assessment of the risk of non-native and invasive plants as a result of the proposed alternatives. This section summarizes the potential effects of non-native and invasive plants to botanical resources, botanical biodiversity, plant communities, and rare plant species.

In general, most of the risk of establishment and spread of non-native species, including very invasive non-natives, is associated with activities that provide vectors for seeds and plant parts. For this proposal, those risks are highest where trails and roads provide access for vehicles, people, domestic animals (*e.g.*, dogs with hikers; horses, etc.), equipment, etc. that could carry seeds and plant parts into new areas. These uses are associated with dispersed recreation uses (*e.g.*, hiking, biking, equestrian use, fishing, hunting, birding, etc.), road and trail maintenance activities (*e.g.*, hand work, equipment use, etc.), activities at developed recreation facilities/sites (*e.g.*, day use areas, trailheads, campgrounds), and activities under Special Use Permits (*e.g.*, filming, events, utility facilities, transportation facilities, etc.).

Non-native species pose a threat to vegetation communities, native plants, as well as rare TES species due to competition for resources (sun, water, soil, etc.). Many non-native species can out-compete natives for those resources. Large-scale non-native plant invasions can alter fire regimes (*e.g.*, cheatgrass creating continuous cover of flashy fuels, etc.) that can further affect vegetation communities and native plants, especially TES species.

The two issues related to non-native species management in this analysis are related directly to how changes in land use zones could influence the spread of non-native species and whether the available control methods would vary by land use zones. This section describes how those changes in land use zones relate to the introduction, spread, and control issues.

*a) Effects of Non-Native Species - Alternative 1 (No Action)*

The non-native species evaluations in the Project Record for the Final EIS for the LMP (USDS Forest Service 2006) provide the basis for this evaluation and they are incorporated here by reference. The analyses in those 2006 biological reports relative to the effects expected from non-native species from the selected alternative are the same as Alternative 1 (No Action) for this proposal.

Implementation of Alternative 1 would have no change in the risk of introduction, establishment, or spread of non-native plants and animals associated with use/maintenance of motorized and non-motorized roads and trails; disturbances from construction, maintenance, and use of Special Use Permitted, administrative/developed recreation facilities; or recreational activities.

Of the three alternatives, Alternative 1 has the highest potential for the introduction, spread, and establishment of non-native plant and animals species based on the types and acreages of suitable uses allowed. In addition, all unauthorized routes would remain in the current land use zones. Since many of the unauthorized routes would remain in BC, they may have the lowest priority for decommissioning and restoration.

Implementation of laws, policies and regulation to control non-native species in existing and recommended wilderness would remain the same. All species specific management including activities to survey, manage, control or eradicate non-native species would continue.

*b) Effects of Non-Native Invasive Plants - Alternative 2 (Proposed Action)*

Compared to the No Action, this alternative has a greater potential to maintain habitat resiliency against establishment of non-natives as the fewest acres have the potential to be disturbed.

*Non-Natives Associated with Use and Maintenance of Motorized Road/Trails:* Implementation of Alternative 2 would have no changes in current access to public use on the 166 miles of existing roads and 118 miles of motorized trail on the LPNF and other possible motorized trails on the ANF and CNF (**Table 6**). Thus, risks of introduction, spread, and establishment of non-native species would not be expected to change from the baseline conditions.

*Non-Natives Associated with Use and Maintenance of Non-Motorized Trails:* There are at least 159 miles of non-motorized trails (**Table 6**) in the IRAs. These include trails used by hiking, biking, and equestrians. Under Alternative 2, mountain bike use would be precluded from the Barker Valley Spur Trail (Barker Valley IRA on CNF) because mountain bike (mechanized equipment) use would not be appropriate in a RW. Reduction of use by mountain bikes may slightly reduce the risk of introduction, establishment, or spread of non-native species in that area.

*Non-Natives Associated with Use of Unauthorized Routes:* There are approximately 188 miles of unauthorized routes known to occur in the project area IRAs, with approximately 41% currently in BCNM or RW (62.7 miles in BCNM and 13.4 miles in RW) (**Table 6**). Under this alternative, 51% of the unauthorized routes would be in BCNM or RW (81.8 miles in BCNM and 13.4 in RW). In as much as being zoned BCNM might result in a priority being placed on closure and restoration of the unauthorized routes, associated motorized use would be expected to decrease over time as the routes were closed and restored. This in turn would help reduce the risk of spread, establishment, and introduction on non-native plants along those routes.

*Non-Natives Associated with Use and Maintenance of Special Uses and Recreation:*

Approximately 359,516 acres are currently open to Special Use activities. Under Alternative 2, the number of acres potentially appropriate for Special Use activities would be reduced because they would not be permitted in RW and some types might not be permitted in BCNM. Under Alternative 2, there would be a reduction to 42,320 acres potentially available (12% of what is available under the No Action Alternative) (**Table 6**). Introduction, establishment, and spread of non-native species in areas disturbed by construction, maintenance, and use of SUP facilities or recreational activities would decrease in Alternative 2 as some of those activities would not be appropriate under the new LUZs (so there may be lower exposure rates).

*Non-Native Species Management Program:* Non-native species management activities that are consistent with the Forest Plan, laws, policies and regulation would continue in all LUZs and RW.

*c) Effects of Non-Native Species - Alternative 3 (Recommended Wilderness Emphasis)*

Of the three alternatives, implementation of Alternative 3 may have the greatest potential to reduce non-native species introductions, establishment, and spread. This alternative may have the greatest potential to maintain habitat resiliency against establishment of non-native species as the fewest acres have the potential to be disturbed.

*Non-Natives Associated with Use and Maintenance of Motorized Road/Trails:* Implementation of Alternative 3 would result in minor reductions in road access even though these roads are not open to the public now (**Table 6**). Thus, risks of introductions, establishment, and spread of non-native species would not be expected to change from the baseline conditions.

*Non-Natives Associated with Use and Maintenance of Non-Motorized Trails:* There are at least 192 miles of non-motorized trails (**Table 6**) in the IRAs. These include trails used by hiking, biking, and equestrians. Under Alternative 3, mountain bike use would be precluded from approximately one half of current trails (**Table 6**) in three IRAs (Trabuco and Coldwater on CNF, Fish Canyon on ANF). Mountain bike (mechanized equipment) use would not be appropriate in RW. Reduction of use by mountain bikes may reduce the risk of introductions, establishment, and spread of non-native species in those areas.

*Non-Natives Associated with Use of Unauthorized Routes:* There are approximately 188 miles of unauthorized routes known to occur in the project area IRAs, with approximately 41% currently in BCNM or RW (67.2 miles in BCNM and 13.4 miles in RW) (**Table 6**). Under this alternative, 79% of the unauthorized routes would be in BCNM or RW (11.3 miles in BCNM and

136.7 in RW). In as much as being zoned BCNM might result in a priority being placed on closure and restoration of the unauthorized routes, associated motorized use would be expected to decrease over time as the routes were closed and restored. This in turn may help reduce the risk of introduction, establishment, and spread of non-native species along those routes.

*Non-Natives Associated with Use and Maintenance of Special Uses and Recreation:*

Approximately 359,515 acres are currently available for Special Use activities. Under Alternative 3, the number of acres potentially available to Special Use activities would be reduced because they would not be permitted in RW and some types might not be permitted in BCNM. Under Alternative 3, there would be a reduction to 24,342 acres potentially available (~7% of what is available under the No Action Alternative) (**Table 6**). Introduction, establishment, and spread of non-native species in areas disturbed by construction, maintenance, and use of SUP facilities or recreational activities may decrease in Alternative 3 as less land would be suitable for these uses.

*Invasive Species Management Program:* Non-native species management activities that are consistent with the Forest Plan, laws, policies and regulation would continue in all LUZs and RW.

II-3.1.5 – Potential Effects to Botanical Resources - General

Section II-3.2.2 includes discussion of the types of activities and effects that may be associated with the activities discussed below.

*a) General Effects to Botanical Resources - Alternative 1 (No Action)*

The biological reports in the Project Record for the Final EIS for the LMP (USDA Forest Service 2006) provide the basis for this evaluation and they are incorporated here by reference. The analyses in those biological reports relative to the effects expected to botanical resources from the selected alternative are the same as Alternative 1 (No Action) for this proposal.

Under Alternative 1, all LUZs would be retained (including Critical Biological) in the 37 IRAs as they were established in the 2006 LMPs. There would be no change to LUZs and baseline conditions for general botanical resources (including for the species listed in **Tables 8, 11, and 16**), vegetation communities, botanical diversity, Threatened, Endangered, Sensitive species, and designated Critical Habitats.

Under Alternative 1, the ability to manage habitats for botanical resources, including TES plants and their habitats, would not change from current conditions. There would be no change in the Forest Service's ability to implement actions to protect botanical resources (including Critical Habitat PCEs). Because of management direction to protect and enhance botanical resources, including rare species, some beneficial effects may occur under Alternative 1.

Under Alternative 1, there would be no change in priority for restoration of unauthorized routes. Watersheds within the 37 IRAs would remain stable, with a few watersheds improving and several watersheds degrading. This could affect native species and riparian vegetation recovery, exotic or invasive species reduction and soil erosion recovery indicators.



In summary, Alternative 1 may:

- Result in continuing or new effects to botanical resources through a continuation of current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits allowed within the LUZs;
- Result in continued or new effects to botanical resources because the ability to improve Watershed Condition Class within the IRAs may be limited where roads and trails exist;
- Result in beneficial effects to botanical resources if funds are available for decommissioning/restoration of unauthorized routes. If negative effects are occurring, they may continue if funds are not available for decommissioning/restoration of unauthorized routes;
- Result in beneficial effects to botanical resources as a result of a continued emphasis for treatments to control, manage, and eradicate non-native species. Treatments would depend on funding availability;
- Provide for continued emphasis for protection of botanical resources, including TES species in Forest Service management actions. This would include activities such as special management considerations to protect PCEs in Critical Habitat and habitat enhancement across all lands that would result in beneficial effects to habitat quality and quantity.

Alternative 1 may result in some negative and some beneficial effects for botanical resources (including TES plants and Critical Habitat) and botanical diversity. If effects are occurring, there would still be management actions available to reduce or eliminate those activities and provide protection for the botanical resources. Since changes would not be made to the transportation system and Special Use permitted activities allowed under the various LUZs, the potential for effects would still exist over the long-term and protection measures may require more effort.

***b) General Effects to Botanical Resources - Alternative 2 (Proposed Action)***

Alternative 2 would increase the LUZs of BCNM and RW and decrease LUZs of BC, BCMUR, DAI and CB within the 37 IRAs included in this proposed action. There would be no change in EW.

Under Alternative 2, the potential effects to individual plant occurrences (including the rare species listed in **Tables 8, 11, and 16**), their habitats, vegetation communities, and botanical diversity may be reduced compared to Alternative 1. This is a result of fewer activities that would be suitable within BCNM and RW (**Table 6**) that could result in negative effects to botanical resources.

Under Alternative 2, beneficial effects to botanical resources are expected to be greater than under Alternative 1. The types of effects associated with current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits, etc. may be reduced or eliminated within BCNM and RW within

the IRAs. The reduction or elimination of those activities may result in fewer effects to botanical resources in scope and scale. The projected increase in semi-primitive recreation opportunities and decrease in semi-primitive motorized may also reduce habitat disturbance and other activities that may affect botanical resources.

There may be a greater potential to reduce effects to botanical resources as a result of decommissioning and restoration of unauthorized routes within BCNM and RW. The increase of acres in BCNM and RW may result in an emphasis and priority on restoration projects in those IRAs.

Additionally, the potentially reduced risk of non-native species in IRAs (as discussed above) under Alternative 2 may also result in long-term beneficial effects for native botanical resources.

Alternative 2 is also expected to result in stable Watershed Condition Class ratings across the four southern California National Forests with several watersheds improving and one degrading. As such, both aquatic and terrestrial habitats, including botanical resources, may benefit through improvements in native and riparian vegetation recovery, exotic or invasive species reduction and soil erosion recovery indicators.

Under Alternative 2, the ability to manage habitats for botanical resources, including TES plants and their habitats, would not change from current conditions. There would be no change in the Forest Service's ability to implement actions to protect botanical resources (including Critical Habitat PCEs). Specific recovery activities and efforts to maintain species viability and protect occurrences and Critical Habitat (PCEs) would continue to be permitted in RW and BCNM. In RW, actions would focus on those compatible with wilderness management objectives.

The management direction to protect and enhance botanical resources, including rare species, would remain in place and there may be increased emphasis in BCNM and RW where user conflicts with botanical resources may be reduced or eliminated.

With an increase in BCNM zoning, there may be increased potential to retain IRA values, including botanical resource values, to provide future opportunities for recommended wilderness designations.

In summary, compared to Alternative 1, Alternative 2 may:

- Reduce potential effects to botanical resources that are associated with current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits allowed within BCNM LUZ and RW;
- Result in improved conditions for botanical resources through the ability to achieve greater improvements in Watershed Condition Class within certain IRAs;
- Reduce potential effects to botanical resources through decommissioning more unauthorized routes due a higher priority for restoration in BCNM and RW zoning;
- Reduce potential effects to botanical resources through an improvement in habitat resiliency against establishment and spread of non-native and invasive species due to a reduction of acres disturbed and by continuing to treat invasive species occurrences; and,

- Provide for continued emphasis for protection of botanical resources, including TES species in Forest Service management actions. This would include activities such as special management considerations to protect PCEs in Critical Habitat and habitat enhancement across all lands that would result in beneficial effects to habitat quality and quantity.

Compared to Alternative 1 (and the current conditions), Alternative 2 may provide more beneficial effects to botanical resources (including TES species and Critical Habitat) and botanical diversity as a result of lower levels of disturbance based on the types and acres of suitable uses that would be allowed.

*c) General Effects to Botanical Resources - Alternative 3 (Recommended Wilderness Emphasis)*

Alternative 3 would increase the total acres of RW while decreasing the acres of BC, BCMUR, BCNM, DAI, and CB LUZs within 35 IRAs. There would be no change in EW.

Under Alternative 3, the potential effects to individual plant occurrences (including the rare species listed in **Tables 8, 11, and 16**), their habitats, vegetation communities, and botanical diversity may be reduced compared to Alternatives 1 and 2. This is as a result of fewer activities that would be suitable in RW (**Table 6**) that could result in negative effects to botanical resources.

Under Alternative 3, the beneficial effects to botanical resources are expected to be the greatest of the three alternatives. The types of effects associated with current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits, etc. may be eliminated or reduced within RW. The reduction or elimination of those activities may result in the fewest effects to botanical resources in scope and scale. The projected increase in semi-primitive recreation opportunities and decrease in semi-primitive motorized may also reduce habitat disturbance and other activities that may affect botanical resources.

The greatest potential benefit to botanical resources (including TES plants, botanical biodiversity, habitats, plant communities, and other rare plants) may occur under Alternative 3 since it would result in the greatest number of acres designated as RW; 525,472 acres of RW would become unsuitable for a number of different actions and activities (**Table 6**).

There may be a greater potential to reduce effects to botanical resources as a result of decommissioning and restoration of unauthorized routes in RW. The highest acreage of RW may also result in an emphasis and priority on restoration projects within those IRAs.

Additionally, the potentially reduced risk of non-native species in IRAs (as discussed above) under Alternative 3 may also result in long-term beneficial effects for native botanical resources.

Of the three alternatives, Alternative 3 would be expected to result in the greatest improvements to Watershed Condition Class across the four southern California National Forests. As such, both aquatic and terrestrial habitats, including botanical resources, may benefit through native

species and riparian vegetation recovery, exotic or invasive species reductions and soil erosion recovery indicators as the overall watershed condition class ratings show an improving trend, particularly on the LPNF.

Under Alternative 3, the ability to manage habitats for botanical resources, including TES plants and their habitats, would not change from current conditions. There would be no change in the Forest Service's ability to implement actions to protect botanical resources (including Critical Habitat PCEs). Specific recovery activities and efforts to maintain species viability and protect occurrences and Critical Habitat (PCEs) would continue to be permitted in RW. In RW, actions would focus on those compatible with wilderness management objectives.

The management direction to protect and enhance botanical resources, including rare species, would remain in place and there may be increased emphasis in RW where user conflicts with botanical resources may be reduced or eliminated. Since Alternative 3 has the highest acreages in RW, it has the greatest potential for beneficial effects to botanical resources as those areas may have a higher priority for protection and restoration.

In summary, compared to Alternatives 1 and 2, Alternative 3 may:

- Result in the highest potential beneficial effects to botanical resources through the greatest reductions in effects as a result of current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits in RW;
- Result in the highest levels of beneficial effects to botanical resources through the ability to achieve the greatest trends for improvement in Watershed Condition Class within the IRAs, particularly on the LPNF;
- Result in the highest potential beneficial effects to botanical resources as a result of reduced effects through decommissioning/restoring the most unauthorized routes due a higher priority for restoration in RW;
- Result in the greatest reduction in potential effects to botanical resources through improvements in habitat resiliency against establishment of invasive species due to the least number of acres disturbed and by continuing to treat invasive species occurrences.
- Provide for continued emphasis for protection of botanical resources, including TES species in Forest Service management actions. This would include activities such as special management considerations to protect PCEs in Critical Habitat and habitat enhancement across all lands that would result in beneficial effects to habitat quality and quantity.

Of the three alternatives, Alternative 3 may provide the greatest level of potential beneficial effects for botanical resources (including TES plants and Critical Habitat) and botanical diversity as a result of lower levels of disturbance based on the types and acres of suitable uses that would be allowed in RW.

#### II-3.1.6– Potential Effects to Other Rare Plants

In addition to the Sensitive plants (Part III of this document) and Threatened/Endangered plants (Part IV of this document), there are other rare plants known from the IRAs. These plants include those that local botanists are concerned about due to declining trends, rarity, severe threats, or other reasons. Under the National Forest Management Act, the Forest Service has an obligation to maintain viability of species on NFS lands. **Table 8** displays other rare plant species that are known from the IRAs. These occurrences are not mapped so acreages are not available.

Four of the nine “other rare plant” species are being proposed for inclusion on the Regional Forester’s Sensitive species list. Since the list may be finalized prior to completion of the Final EIS for this project, those four species are evaluated in the Biological Evaluation (Part III of this document) to avoid a need to evaluate them in the future. Those four species are: *Calochortus clavatus* var. *clavatus*, *Chorizanthe xanti* var. *leucotheca*, *Lepechinia rossii*, and *Monardella australis* ssp. *jokerstii*.

The species evaluated here are: *Boykinia rotundifolia*, *Hulsea vestita* ssp. *callicarpha*, *Lilium humboldtii* var. *ocellatum*, *Polygala cornuta* var. *fishiae*, and *Washingtonia filifera*.

##### a) Potential Effects to Other Rare Plants - Alternative 1 (No Action)

The biological reports in the Project Record for the Final EIS for the LMP (USDA Forest Service 2006) provide the basis for this evaluation and they are incorporated here by reference. The viability assessments in those 2006 biological reports relative to the effects expected to botanical resources from the selected alternative are the same as Alternative 1 (No Action) for this proposal.

The occurrences of the other rare plants listed above are unmapped so acreages and location relative to the LUZs are unknown. Section II-3.2.2 includes discussion of the types of effects that may be associated with the LUZs present in the IRAs.

##### b) Potential Effects to Other Rare Plants - Alternative 2 (Proposed Action)

It is not possible to determine the potential effects for the remaining species in **Table 8** without knowing the occurrence locations relative to LUZ. Nonetheless, if there are effects occurring to those occurrences, there may be a reduction of effects due to an increase of BCNM and RW which would be more restrictive under Alternative 2. However, without the actual locations, it is not possible to be certain about the potential effects.

##### c) Potential Effects to Other Rare Plants - Alternative 3 (Recommended Wilderness Emphasis)

It is not possible to determine the potential effects for the remaining species in **Table 8** without knowing the occurrence locations relative to LUZ. Nonetheless, if there are effects occurring to those occurrences, there may be a reduction of effects due to the highest increase in RW under Alternative 3. However, without the actual locations, it is not possible to be certain about the potential effects.

#### II-3.1.7– Cumulative Effects

Numerous past, present, and reasonably foreseeable future human and natural actions potentially may cause both negative and positive impacts on federally listed Threatened and Endangered species and/or critical habitats, and R5 Sensitive species viability and/or habitats. Activities such as recreation, land development, mining, grazing, timber harvest, road construction/maintenance, habitat restoration, natural disasters etc. all may have the potential to impact plant species and their habitats.

NFS lands are also places where numerous unauthorized activities occur including hazardous material dumping, trash dumping, and illicit drug cultivation. State and private activities and/or events may also occur on the NFS lands with or without permits or authorizations. Other uncontrollable factors such as climate change may also have an unforeseen effect on plant species and their habitats. Broad changes in the environment such as climate change are probably not affected by land use zoning changes on the Southern California National Forests. However, management of IRAs with an increase of land use zones that result in less intensive development and limited motorized access may result in ecologically resilient landscapes that may have a great capacity to survive natural disturbances and large-scale threats to sustainability, especially under changing and uncertain future environmental conditions, such as those driven by climate change and increasing human use.

Cumulative effects consist of alteration of occupied, suitable or potentially suitable habitat for plant species. Southern California National Forests are some of the most highly recreated forests in Region 5. NFS lands have land management plan guidance that provides for protection and restoration of species and habitats. Land use zoning is one of these land management tools. The continued implementation of the LMPs and management of the land use zones may help reduce impacts on species and habitats. Despite this, forest use is expected to increase in the present and near future, as the population of southern California continues to increase. The cumulative effect of all of these activities is a reduction in quantity and quality of habitat for federally listed and R5 Sensitive species over the long term. This effect is permanent, as more areas become developed and fewer areas remain undisturbed.

The cumulative effects analysis in the 2005 LMP EIS (USDA Forest Service 2006, FEIS-Volume 1 p. 394) is still relevant and applicable. The individual species accounts contain relevant and applicable cumulative effects discussions (**Appendix C** of this document). Those discussions are incorporated here by reference.

### II-3.1.8 – Summary of Potential Effects

**Table 9** summarizes the potential effects to native botanical resources, vegetation communities, and botanical diversity.

<b>Table 9. Summary of Effects to Botanical Resources, Plant Communities, and Botanical Diversity</b>				
<b>Measure</b>	<b>Indicator</b>	<b>Alternative 1 (No Action)</b>	<b>Alternative 2 (Proposed Action)</b>	<b>Alternative 3 (RW Emphasis)</b>
<b>Effects To All Plant Species Habitat (Including Beneficial Effects)</b>	Intensive Development	No change from existing environment	Less intensive development than Alternative 1 but more than Alternative 3.	Least intensive development compared to Alternatives 1 and 2.
	Motorized/ Mechanized Access	No change from existing environment	Less motorized/mechanized access than Alternative 1 but more than Alternative 3.	Least motorized/mechanized access.
	Cumulative effects	No change from existing environment	Less than Alternative 1 but more than Alternative 3.	Least of all alternatives

### **II-3.2 – Potential Effects from Monitoring and Evaluation Alternatives**

See Section I-3.0 in the description of alternatives for the secondary component of the proposal to amend the LMP monitoring and evaluation methods.

#### *Potential Effects From Monitoring Alternatives On Threatened, Endangered, And Sensitive Species, General Botanical Resources And Non-Native Species*

Changing the monitoring methodology, in itself, is not expected to result in effects to botanical resources (including Sensitive, Threatened, Endangered, other rare plants, general botanical resources, and Critical Habitat) or non-natives species management.

### **II-4.0 –FINDINGS**

Implementation of any of the three alternatives is expected to result in beneficial effects for general botanical resources and vegetation communities, as described above. None of the alternatives, including the No Action, would be expected to result in a loss of population viability for any native plant species found in any of the affected IRAs.

## **PART III: BIOLOGICAL EVALUATION OF IMPACTS TO FOREST SERVICE SENSITIVE SPECIES**

### **III-1.0 – INTRODUCTION**

Part I of this document contained descriptions of the methods/evaluation process, alternatives, and existing conditions in the IRAs. Part II addresses potential effects to native plant species and vegetation communities, as well as impacts that are common to those species as well as special status species that are discussed in depth in Parts III and IV.

This part, Part III, covers discussions of potential effects to species on the Region 5 Forest Service Sensitive species list.

### **III-2.0 –BASELINE CONDITIONS AND POTENTIAL EFFECTS**

Existing environment conditions in the IRAs are described in Part II-2.0 as well as in the 2006 FEIS for the LMP revision. **Table 10** contains a list of the Forest Service Sensitive species that were considered in this analysis and those that are known or have potential to occur on each of the National Forests.

**Table 11** displays which Sensitive plants are known in each IRA. **Table 12** displays the acreage of known Sensitive plant occurrences by IRA. **Table 13** displays a summary of acreage of known Sensitive plant occurrences by species for all of the IRAs. Because focused surveys have not been conducted in all parts of every IRA, it is possible that other Sensitive plant occurrences are present but undetected/unmapped in the IRAs. **Appendix B-Map Packet** contains maps of each of the Sensitive species occurrences known from the affected IRAs.

The potential effects discussion in section II-3.2 is applicable to any Sensitive plants that are known to occur or may occur in the affected IRAs. The cumulative effects discussion in section II-3.2.4 is applicable to any Sensitive plants that are known to occur or may occur in the affected IRAs.

In this analysis, the two issues related to Sensitive plant species management are the large number of species that are known or have the potential to occur with the IRAs and how changes in the LUZ allocations influence the types and intensity of projects that may occur in the future.

Detailed species accounts for all of the Sensitive species discussed below are contained in the **Appendix C**; relevant species account information is summarized in the following discussions (“Species Information”). References are included in the full species accounts (**Appendix C**) and are not repeated here.

There are several species that have been proposed for addition to the Regional Forester’s Sensitive species list. Since they may be considered Sensitive before the Record of Decision has been signed for this project, those species (where noted) are being evaluated as Sensitive so that it would not be necessary to conduct another analysis later.



**Table 10. Sensitive Plant Species And Their Locations On Southern California National Forests**

Scientific Name	Common Name	Occurrences by National Forest <sup>1,4</sup>			
		ANF	CNF	LPNF	SBNF
<i>Abies bracteata</i>	Santa Lucia fir			K	
<i>Abronia nana</i> spp. <i>Covillei</i>	Coville's dwarf abronia				K
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena		P		K
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	Abrams' flowery puncturebract			K	
<i>Acanthoscyphus parishii</i> var. <i>cienegensis</i>	Cienega Seca flowery puncturebract				K
<i>Agrostis hooveri</i>	Hoover's bentgrass			K	
<i>Allium hickmanii</i>	Hickman's onion			K	
<i>Allium howellii</i> var. <i>clokeyi</i>	Mt. Pinos onion			K	
<i>Allium marvinii</i>	Yucaipa onion				K
<i>Arctostaphylos cruzensis</i>	Arroyo de la Cruz manzanita			K	
<i>Arctostaphylos edmundsii</i>	Little Sur manzanita			K	
<i>Arctostaphylos gabrielensis</i>	San Gabriel manzanita	K			
<i>Arctostaphylos hooveri</i>	Hoover's manzanita			K	
<i>Arctostaphylos luciana</i>	Santa Lucia manzanita			K	
<i>Arctostaphylos obispoensis</i>	Bishop manzanita			K	
<i>Arctostaphylos pilosula</i>	Santa Margarita manzanita			K	
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita		K		
<i>Arctostaphylos refugioensis</i>	Refugio manzanita			K	
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i>	rock sandwort				K
<i>Arenaria macradenia</i> var. <i>kuschei</i>	Kusche's sandwort	K			
<i>Astragalus bicristatus</i>	crested milk-vetch	P			K
<i>Astragalus deanei</i>	Dean's milk-vetch		K		
<i>Astragalus douglasii</i> var. <i>perstrictus</i>	Jacumba milk-vetch		K		
<i>Astragalus lentiginosus</i> var. <i>Antonius</i>	San Antonio milk-vetch	K			K
<i>Astragalus lentiginosus</i> var. <i>sierrae</i>	Big Bear Valley milk-vetch	K			K
<i>Astragalus oocarpus</i>	San Diego milk-vetch		K		
<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Jaeger's milk-vetch		K		K
<i>Atriplex parishii</i>	Parish's brittle scale				P
<i>Baccharis plummerae</i> ssp. <i>glabrata</i>	San Simeon Baccharis			P	
<i>Bloomeria humilis</i>	dwarf goldenstar			P	

**Table 10. Sensitive Plant Species And Their Locations On Southern California National Forests**

Scientific Name	Common Name	Occurrences by National Forest <sup>1,4</sup>			
		ANF	CNF	LPNF	SBNF
<i>Botrychium crenulatum</i>	scalloped moonwort	K			K
<i>Boechera breweri</i> var. <i>pecuniaria</i>	San Bernardino rock cress				K
<i>Boechera johnstonii</i>	Johnston's rock cress				K
<i>Boechera parishii</i>	Parish's rock cress				K
<i>Boechera shockleyi</i>	Shockley's rock cress				K
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea		K		
<i>Calochortus clavatus</i> var. <i>clavatus</i> <sup>2</sup>	club-haired mariposa lily	K		K	
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	K			P
<i>Calochortus dunnii</i>	Dunn's mariposa lily		K		
<i>Calochortus obispoensis</i>	San Luis mariposa lily			K	
<i>Calochortus palmeri</i> var. <i>munzii</i>	Munz's mariposa lily				K
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa lily	K		K	K
<i>Calochortus plummerae</i> <sup>3</sup>	Plummer's mariposa lily	K	P	P	K
<i>Calochortus simulans</i>	San Luis Obispo mariposa lily			K	
<i>Calochortus striatus</i>	alkali mariposa lily	K			P
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily		K		
<i>Calochortus weedii</i> var. <i>vestus</i>	late-flowered mariposa lily	K		K	
<i>Calycadenia villosa</i>	dwarf western rosinweed			K	
<i>Calystegia subacaulis</i> ssp. <i>episcopalis</i>	Cambria morning-glory			P	
<i>Camissonia hardhamiae</i>	Hardham's evening-primrose			K	
<i>Canbya candida</i>	pygmy poppy	K			K
<i>Carex obispoensis</i>	San Luis Obispo sedge			K	
<i>Carlquistia muirii</i>	Muir's tarplant			K	
<i>Castilleja gleasonii</i>	Mt. Gleason's Indian paintbrush	K			
<i>Castilleja lasiorhyncha</i>	San Bernardino Mountains owl's-clover		P		K
<i>Castilleja plagiotoma</i>	Mojave Indian paintbrush	K		P	K
<i>Caulanthus amplexicaulis</i> var. <i>barbarae</i>	Santa Barbara jewel-flower			K	
<i>Caulanthus lemmonii</i>	Lemmon's jewel-flower			K	
<i>Caulanthus simulans</i>	Payson's jewel-flower		K		K
<i>Ceanothus cyaneus</i>	Lakeside Ceanothus		K		

**Table 10. Sensitive Plant Species And Their Locations On Southern California National Forests**

Scientific Name	Common Name	Occurrences by National Forest <sup>1,4</sup>			
		ANF	CNF	LPNF	SBNF
<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	dwarf soaproot			K	
<i>Chorizanthe blakleyi</i>	Blakley's spineflower			K	
<i>Chorizanthe breweri</i>	Brewer's spineflower			K	
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	P		P	
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	P	K		P
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> <sup>3</sup>	long-spined spineflower		K	P	K
<i>Chorizanthe rectispina</i>	straight-awned spineflower			K	
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> <sup>2</sup>	Riverside spineflower				K
<i>Cirsium loncholepis</i>	La Graciosa thistle			P	
<i>Clarkia delicata</i> <sup>3</sup>	delicate clarkia		K		
<i>Clarkia jolonensis</i>	Jolon clarkia			K	
<i>Claytonia lanceolata</i> var. <i>peirsonii</i>	Peirson's spring beauty	K			K
<i>Deinandra floribunda</i>	Tecate tarplant		K		
<i>Deinandra mohavensis</i>	Mojave tarplant	P	K		K
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	Cuyamaca larkspur		K		K
<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur			K	
<i>Delphinium parryi</i> ssp. <i>purpureum</i>	Mt. Pinos larkspur			K	
<i>Delphinium umbraculorum</i>	umbrella larkspur			K	
<i>Dieteria asteroides</i> var. <i>lagunensis</i>	Mount Laguna aster		K		
<i>Dieteria canescens</i> var. <i>ziegleri</i>	Ziegler's aster				K
<i>Draba corrugata</i> var. <i>saxosa</i>	rock draba				K
<i>Dudleya abramsii</i> ssp. <i>affinis</i>	San Bernardino Mountains Dudleya				K
<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	San Gabriel River Dudleya	K			
<i>Dudleya densiflora</i>	San Gabriel Mountains Dudleya	K			
<i>Dudleya multicaulis</i>	many-stemmed Dudleya	K	K		
<i>Dudleya viscida</i>	sticky Dudleya		K		
<i>Eriastrum hooveri</i>	Hoover's eriastrum			K	
<i>Eriastrum luteum</i>	yellow-flowered eriastrum			K	
<i>Eriogonum butterworthianum</i>	Butterworth's buckwheat			K	
<i>Eriogonum evanidum</i>	vanishing wild buckwheat		P		H

**Table 10. Sensitive Plant Species And Their Locations On Southern California National Forests**

Scientific Name	Common Name	Occurrences by National Forest <sup>1,4</sup>			
		ANF	CNF	LPNF	SBNF
<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	southern alpine buckwheat	K		K	K
<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	Johnston's buckwheat	K			K
<i>Eriogonum microthecum</i> var. <i>lacus-ursi</i>	Bear Lake buckwheat				P
<i>Eriophyllum lanatum</i> var. <i>hallii</i>	Fort Tejon woolly sunflower			K	
<i>Fremontodendron mexicanum</i>	Mexican flannelbush		P		
<i>Fritillaria falcata</i>	talus fritillary			K	
<i>Fritillaria liliacea</i>	fragrant fritillary			P	
<i>Fritillaria ojaiensis</i>	Ojai fritillary			K	
<i>Fritillaria viridea</i>	San Benito fritillary			K	
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	San Jacinto Mountains bedstraw				K
<i>Galium californicum</i> ssp. <i>luciense</i>	Cone Peak bedstraw			K	
<i>Galium californicum</i> ssp. <i>primum</i>	California bedstraw				K
<i>Galium clementis</i>	Santa Lucia bedstraw			K	
<i>Galium grande</i>	San Gabriel bedstraw	K			
<i>Galium hardhamiae</i>	Hardham's bedstraw			K	
<i>Gentiana fremontii</i>	moss gentian				K
<i>Gilia leptantha</i> ssp. <i>leptantha</i>	San Bernardino gilia				K
<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	Mission Canyon bluecup		K		
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	P			H
<i>Hesperocyparis forbesii</i> (formerly <i>Cupressus</i> )	Tecate cypress		K		
<i>Hesperocyparis stephensonii</i> (formerly <i>Cupressus arizonica</i> ssp. <i>arizonica</i> )	Cuyamaca cypress		K		
<i>Heuchera abramsii</i>	Abrams's alumroot	K		K	P
<i>Heuchera elegans</i>	urn-flowered alumroot	K		K	K
<i>Heuchera hirsutissima</i>	shaggy-haired alumroot				K
<i>Heuchera parishii</i>	Parish's alumroot				K
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	mesa horkelia	P	K	K	P
<i>Horkelia cuneata</i> ssp. <i>sericea</i>	Kellogg's horkelia			P	
<i>Horkelia truncata</i>	Ramona horkelia		K		
<i>Horkelia wilderae</i>	Barton Flats horkelia				K

**Table 10. Sensitive Plant Species And Their Locations On Southern California National Forests**

Scientific Name	Common Name	Occurrences by National Forest <sup>1,4</sup>			
		ANF	CNF	LPNF	SBNF
<i>Horkelia yadonii</i>	Santa Lucia horkelia			K	
<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	San Gabriel Mountains sunflower	K		K	P
<i>Hulsea vestita</i> ssp. <i>pygmaea</i>	pygmy hulsea	P			K
<i>Imperata brevifolia</i>	California satintail	K		K	P
<i>Ivesia argyrocoma</i>	silver-haired Ivesia				K
<i>Ivesia callida</i>	Tahquitz Ivesia				K
<i>Layia heterotricha</i>	pale-yellow layia			K	
<i>Layia jonesii</i>	Jones's layia			P	
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage		K		
<i>Lepechinia fragrans</i>	fragrant pitcher sage	K			K
<i>Lepechinia rossii</i> <sup>2</sup>	Ross' pitcher sage	K			
<i>Leptosiphon floribundus</i> ssp. <i>hallii</i>	Santa Rosa Mountains leptosiphon				K
<i>Lessingia glandulifera</i> var. <i>tomentosa</i>	Warner Springs lessingia		K		
<i>Lilium parryi</i>	lemon lily	K	P		K
<i>Limnanthes alba</i> var. <i>parishii</i>	Parish's meadowfoam		K		K
<i>Linanthus concinnus</i>	San Gabriel linanthus	K			K
<i>Linanthus jaegeri</i>	San Jacinto prickly phlox				K
<i>Linanthus killipii</i>	Baldwin Lake linanthus				K
<i>Linanthus orcuttii</i>	Orcutt's linanthus	P	K		K
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle			P	
<i>Lupinus ludovicianus</i>	San Luis Obispo lupine			K	
<i>Lupinus peirsonii</i>	Peirson's lupine	K			
<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	Carmel Valley bush mallow			K	
<i>Malacothamnus palmeri</i> var. <i>lucianus</i>	Arroyo Seco bush mallow			K	
<i>Malacothamnus palmeri</i> var. <i>palmeri</i>	Santa Lucia bush mallow			P	
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix			K	
<i>Malaxis monophyllos</i> ssp. <i>brachypoda</i>	adder's-mouth				K
<i>Marina orcuttii</i> var. <i>orcuttii</i>	California marina				K
<i>Matelea parviflora</i>	Spearleaf				K
<i>Meesia triquetra</i>	three-ranked hump-moss				P

**Table 10. Sensitive Plant Species And Their Locations On Southern California National Forests**

Scientific Name	Common Name	Occurrences by National Forest <sup>1,4</sup>			
		ANF	CNF	LPNF	SBNF
<i>Meesia uliginosa</i>	broad-nerved hump-moss				P
<i>Mimulus exiguus</i>	San Bernardino Mountains monkeyflower				K
<i>Mimulus purpureus</i>	purple monkeyflower				K
<i>Monardella australis</i> sssp. <i>jokersti</i> <sup>2</sup>	Jokerst's monardella	P			K
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella		K		
<i>Monardella linoides</i> ssp. <i>oblonga</i>	flax-like monardella			K	
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	K	K		K
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	San Felipe monardella		K		K
<i>Monardella palmeri</i>	Palmer's monardella			K	
<i>Monardella viridis</i> ssp. <i>saxicola</i>	rock monardella	K			K
<i>Nasturtium gambelii</i>	Gambel's water cress				P
<i>Navarretia peninsularis</i>	Baja Navarretia	P	P	K	K
<i>Nolina cismontana</i>	chaparral nolina		K	K	
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail	K			K
<i>Oreonana vestita</i>	woolly mountain-parsley	K			K
<i>Orobanche valida</i> ssp. <i>valida</i>	Rock Creek broomrape	K		K	K
<i>Packera bernardina</i>	San Bernardino ragwort				K
<i>Packera ganderi</i>	Gander's ragwort		K		
<i>Parnassia cirrata</i> var. <i>cirrata</i>	fringed grass-of-parnassus	K			K
<i>Pedicularis dudleyi</i>	Dudley's lousewort			K	
<i>Penstemon californicus</i>	California beardtongue		K		K
<i>Pentachaeta exilis</i> ssp. <i>aeolica</i>	slender pentachaeta			K	
<i>Phacelia exilis</i>	Transverse Range phacelia	P		P	K
<i>Phacelia keckii</i>	Keck's phacelia		K		
<i>Phlox dolichantha</i>	Big Bear Valley phlox				K
<i>Plagiobothrys uncinatus</i>	hooked popcorn-flower			K	
<i>Potentilla glandulosa</i> ssp. <i>ewanii</i>	Ewan's cinquefoil	K			K
<i>Potentilla rimicola</i>	cliff cinquefoil				K
<i>Pyrrocoma uniflora</i> var. <i>gossypina</i>	Bear Valley Pyrrocoma				K
<i>Quercus dumosa</i>	Nuttall's scrub oak			P	

**Table 10. Sensitive Plant Species And Their Locations On Southern California National Forests**

Scientific Name	Common Name	Occurrences by National Forest <sup>1,4</sup>			
		ANF	CNF	LPNF	SBNF
<i>Ribes canthariforme</i>	Moreno currant		K		
<i>Saltugilia latimeri</i>	Latimer's woodland-gilia				K
<i>Sanicula maritima</i>	adobe sanicle			K	
<i>Satureja chandleri</i>	San Miguel savory		K		
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern skullcap	P	K		K
<i>Sedum niveum</i>	Davidson's stonecrop				K
<i>Sibaropsis hammittii</i>	Hammitt's clay-cress		K		
<i>Sidalcea hickmanii</i> ssp. <i>anomala</i>	Cuesta Pass checkerbloom			K	
<i>Sidalcea hickmanii</i> ssp. <i>hickmanii</i>	Marin checkerbloom			K	
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	Parish's checkerbloom	P		K	K
<i>Sidothea caryophylloides</i>	chickweed starry puncturebract	K		K	K
<i>Sidothea emarginata</i>	white-margined starry puncturebract				K
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower			K	
<i>Streptanthus bernardinus</i>	Laguna Mountains jewelflower	P	K		K
<i>Streptanthus campestris</i>	southern jewelflower	K	K	K	K
<i>Symphotrichum defoliatum</i>	San Bernardino aster	P	K	P	K
<i>Tetracoccus dioicus</i>	Parry's tetracoccus		K		
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern	K		K	K
<i>Thermopsis californica</i> var. <i>semota</i>	velvety false lupine		K		
<i>Thermopsis macrophylla</i>	Santa Ynez false lupine			K	
<i>Tritelia ixioides</i> ssp. <i>cookii</i>	Cook's triteleia			K	
<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum			P	
<i>Viola pinetorum</i> ssp. <i>grisea</i>	grey-leaved violet			K	
<sup>1</sup> K=Known to occur on USFS lands P=Potential to occur on USFS lands		<sup>2</sup> Proposed for addition to the Regional Forester's Sensitive list in 2012. Being considered as Sensitive for the purposes of this evaluation. <sup>3</sup> Proposed for removal from the Regional Forester's Sensitive list in 2012. Being considered as Sensitive for the purposes of this evaluation. <sup>4</sup> Only species proposed for addition/removal to the Sensitive species that are known to occur in the 35 IRAs are notated in this table.			

Table 11. Sensitive Plant Occurrences by Inventoried Roadless Area		
Sensitive Plants Known in IRAs	Common Name	Occurrence
<b>Angeles National Forest</b>		
<b>Fish Canyon</b>		
<i>Calochortus clavatus</i> ssp. <i>clavatus</i> <sup>2</sup>	club-haired mariposa lily	K
<i>Calochortus clavatus</i> ssp. <i>gracilis</i>	slender mariposa lily	K
<i>Castilleja gleasonii</i>	Mt. Gleason's Indian paintbrush	K
<i>Opuntia basilaris</i> ssp. <i>brachyclada</i>	short-joint beavertail	K
<b>Red Mountain</b>		
<i>Calochortus clavatus</i> ssp. <i>clavatus</i> <sup>2</sup>	club-haired mariposa lily	K
<i>Calochortus clavatus</i> ssp. <i>gracilis</i>	slender mariposa lily	K
<i>Lepechinia rossii</i> <sup>2</sup>	Ross' pitcher sage	K
<i>Opuntia basilaris</i> ssp. <i>brachyclada</i>	short-joint beavertail	K
<b>Salt Creek</b>		
<i>Calochortus clavatus</i> ssp. <i>clavatus</i> <sup>2</sup>	club-haired mariposa lily	K
<i>Calochortus clavatus</i> ssp. <i>gracilis</i>	slender mariposa lily	K
<b>Tule</b>		
<i>Calochortus clavatus</i> ssp. <i>clavatus</i> <sup>2</sup>	club-haired mariposa lily	K
<i>Calochortus clavatus</i> ssp. <i>gracilis</i>	slender mariposa lily	K
<i>Lepechinia rossii</i> <sup>2</sup>	Ross' pitcher sage	K
<i>Opuntia basilaris</i> ssp. <i>brachyclada</i>	short-joint beavertail	K
<b>Westfork</b>		
<i>Calochortus plummerae</i>	Plummer's mariposa lily	K
<i>Imperata brevifolia</i>	California satintail	K
<i>Lepechinia fragrans</i>	Island pitcher sage	K
<i>Linanthus concinnus</i>	San Gabriel linanthus	K
<b>West Fork</b>		
<i>Calochortus plummerae</i>	Plummer's mariposa lily	K
<i>Dudleya densiflora</i>	San Gabriel Mountains dudleya	K



Table 11. Sensitive Plant Occurrences by Inventoried Roadless Area		
Sensitive Plants Known in IRAs	Common Name	Occurrence
<i>Imperata brevifolia</i>	California satintail	K
<i>Lepechinia fragrans</i>	fragrant pitcher sage	K
<i>Lilium parryi</i>	lemon lily	K
<i>Linanthus concinnus</i>	San Gabriel linanthus	K
<b>Cleveland National Forest</b>		
<b>Barker Valley</b>		
<i>Astragalus oocarpus</i>	Descanso milkvetch, San Diego milkvetch	K
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	K
<i>Caulanthus simulans</i>	Payson's wild cabbage	K
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> <sup>1</sup>	long-spined spineflower	K
<i>Limnanthes alba</i> var. <i>parishi</i> (formerly <i>L. gracilis</i> var. <i>parishii</i> )	Parish's slender meadowfoam	K
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	K
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	San Felipe monardella	K
<b>Caliente</b>		
<i>Linanthus orcuttii</i> <sup>3</sup>	Orcutt's linanthus	K
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	K
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New</b>		
<i>Astragalus deanii</i>	Deane's milkvetch	K
<i>Clarkia delicate</i>	Campo clarkia	K
<b>Coldwater</b>		
<i>Calochortus weedii</i> var. <i>intermedius</i>	Weed's (intermediate) mariposa lily	K
<i>Chorizanthe parryi</i> var. <i>parryi</i>	San Bernardino spineflower	K
<i>Lepechinia cardiophylla</i>	Santa Ana pitchersage	K
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	K
<i>Phacelia keckii</i>	Kecks' phacelia	K
<b>Eagle Peak</b>		
<i>Astragalus oocarpus</i>	Descanso milkvetch	K

Table 11. Sensitive Plant Occurrences by Inventoried Roadless Area		
Sensitive Plants Known in IRAs	Common Name	Occurrence
<b>Ladd</b>		
<i>Calochortus weedii</i> var. <i>intermedius</i>	Weed's intermediate mariposa lily	K
<i>Lepichinia cardiophylla</i>	Heart-leaved pitchersage	K
<i>Phacelia keckii</i>	Keck's phacelia	K
<b>No Name IRA</b>		
<i>Horkelia truncata</i> <sup>3</sup>	Ramona horkelia	K
<b>Sill Hill IRA</b>		
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	K
<i>Calochortus dunnii</i>	Dunn's mariposa lily	K
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i> <sup>3</sup>	Cuyamaca larkspur	K
<i>Hesperocyparis stephensonii</i> ( <i>Cupressus arizonica</i> ssp. <i>a</i> )	Cuyamaca cypress	K
<i>Thermopsis californica</i> var. <i>semota</i>	CA goldenbanner, velvety false lupine	K
<b>Trabuco IRA</b>		
<i>Dudleya viscida</i>	Sticky Dudleya	K
<i>Horkelia cuneata</i> var. <i>puberula</i>	Wedgeleaf horkelia	K
<i>Lepechinia cardiophylla</i>	Santa Ana pitchersage	K
<i>Nolina cismontana</i>	Chaparral or Peninsular beargrass	K
<i>Phacelia. keckii</i>	Keck's phacelia	K
<i>Satureja chandleri</i>	San Miguel calamint	K
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	K
<b>Upper San Diego River</b>		
<i>Astragalus deanii</i>	Deanne's milkvetch	K
<i>Clarkia delicata</i> <sup>1</sup>	Campo clarkia	K
<b>Los Padres National Forest</b>		
<b>Antimony</b>		
<i>Imperata brevifolia</i> <sup>3</sup>	California satintail	K
<i>Layia heterotricha</i> <sup>3</sup>	Pale yellow layia	K

Table 11. Sensitive Plant Occurrences by Inventoried Roadless Area		
Sensitive Plants Known in IRAs	Common Name	Occurrence
<b>Black Mountain</b>		
<i>Arctostaphylos pilosula</i> <sup>3</sup>	Santa margarita manzanita	K
<i>Calycadenia villosa</i> <sup>3</sup>	Dwarf western rosinweed	K
<i>Chorizanthe rectispina</i> <sup>3</sup>	Straight awned spineflower	K
<i>Eriastrum luteum</i> <sup>3</sup>	Yellow flowered eriastrum	K
<b>Diablo</b>		
<i>Delphinium umbraculorum</i>	Umbrella larkspur	K
<b>Dry Lakes</b>		
<i>Calochortus weedii</i> var. <i>vestus</i>	Weeds' (late flowered) mariposa lily	K
<i>Imperata brevifolia</i>	California satintail	K
<b>Fox Mountain</b>		
<i>Chorizanthe blakleyi</i> <sup>3</sup>	Blakley's. spineflower	K
<i>Delphinium umbraculorum</i> <sup>3</sup>	Umbrella larkspur	K
<i>Eriophyllum lanatum</i> var. <i>hallii</i> <sup>3</sup>	Fort Teton woolly sunflower	K
<i>Layia heterotricha</i> <sup>3</sup>	Pale-yellow layia	K
<i>Sidalcea hickmanii</i> ssp. <i>parishi</i> <sup>3</sup>	Parish's checkerbloom	K
<b>Garcia Mountain</b>		
<i>Calochortus palmeri</i> var. <i>palmeri</i> <sup>3</sup>	Palmer's mariposa lily	K
<i>Calochortus simulans</i> <sup>3</sup>	San Luis Obispo mariposa lily	K
<i>Delphinium umbraculorum</i> <sup>3</sup>	Umbrella larkspur	K
<b>Machesna Mountain</b>		
<i>Arctostaphylos pilosula</i> <sup>3</sup>	Santa Margarita manzanita	K
<i>Calochortus palmeri</i> var. <i>palmeri</i> <sup>3</sup>	Palmer's mariposa lily	K
<i>Calochortus simulans</i> <sup>3</sup>	San Luis Obispo mariposa lily	K
<i>Delphinium umbraculorum</i> <sup>3</sup>	Umbrella larkspur	K
<i>Sidalcea hickmanii</i> ssp. <i>parishi</i> <sup>3</sup>	Parish's checkerbloom	K
<b>Mudulce</b>		

Table 11. Sensitive Plant Occurrences by Inventoried Roadless Area		
Sensitive Plants Known in IRAs	Common Name	Occurrence
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> <sup>3</sup>	Carmel Valley malacothrix	K
<b>Quatal</b>		
<i>Layia heterotrichia</i> <sup>3</sup>	Pale yellow layia	K
<b>Sawmill – Badlands</b>		
<i>Navarretia peninsularis</i>	Baja pincushion plant	K
<b>Sespe – Frazier</b>		
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	Abram’s oxytheca	K
<i>Allium howellii</i> var. <i>clokeyi</i> <sup>3</sup>	Mt. Pinos onion	K
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer’s mariposa lily	K
<i>Calochortus weedi</i> var. <i>vestitus</i> <sup>3</sup>	Late flowered mariposa lily	K
<i>Delphinium umbraculorum</i> <sup>3</sup>	Umbrella larkspur	K
<i>Fritillaria ojaiensis</i>	Ojai fritillary	K
<i>Layia heterotrichia</i> <sup>3</sup>	Pale-yellow layia	K
<i>Monardella linoides</i> ssp. <i>oblonga</i>	Flaxleaf monardella, Tehachapi monardella	K
<i>Navarretia peninsularis</i>	Baja pincushion plant	K
<i>Phacelia excilis</i> <sup>1, 3</sup>	Transverse Range phacelia	K
<b>Spoor Canyon</b>		
<i>Calochortus simulans</i> <sup>3</sup>	San Luis Obispo mariposa lily	K
<i>Chorizanthe blakleyi</i> <sup>3</sup>	Blakley’s spineflower	K
<i>Delphinium umbraculorum</i> <sup>3</sup>	Umbrella larkspur	K
<i>Sidalcea hickmanii</i> spp. <i>parishi</i> <sup>3</sup>	Parish’s checkerbloom	K
<b>Tequepis</b>		
<i>Arctostaphylos refugioensis</i> <sup>3</sup>	Refugio manzanita	K
<i>Calochortus weedii</i> var. <i>vestitus</i> <sup>3</sup>	Late flowered mariposa lily	K
<i>Delphinium umbraculorum</i> <sup>3</sup>	Umbrella larkspur	K
<i>Fritillaria ojaiensis</i> <sup>3</sup>	Ojai fritillary	K
<i>Thermopsis macrophylla</i> <sup>3</sup>	San Ynez false lupine	K

Table 11. Sensitive Plant Occurrences by Inventoried Roadless Area		
Sensitive Plants Known in IRAs	Common Name	Occurrence
<b>White Ledge</b>		
<i>Calochortus weedii</i> var. <i>vestus</i> <sup>3</sup>	Late flowered mariposa lily	K
<i>Delphinium umbraculorum</i> <sup>3</sup>	Umbrella larkspur	K
<i>Fritillaria ojaiensis</i> <sup>3</sup>	Ojai fritillary	K
<i>Streptanthus campestris</i>	Southern jewelflower	K
<b>San Bernardino National Forest</b>		
<b>Cactus Springs B</b>		
<i>Astragalus bicristatus</i>	Two crested milkvetch	K
<i>Calochortus palmeri</i> var. <i>munzii</i>	Palmer's mariposa lily	K
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> <sup>2</sup>	Riverside spineflower	K
<i>Dieteria canescens</i> var. <i>ziegleri</i> (formerly <i>Machaeranthera</i> )	Ziegler's tansy aster	K
<i>Draba corrugata</i> var. <i>saxosa</i>	Southern California draba	K
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	San Jacinto bedstraw	K
<i>Heuchera hirsutissima</i>	Shaggyhair alumroot	K
<i>Lilium parryi</i>	Lemon lily	K
<i>Saltugilia latimeri</i> <sup>3</sup>	Latimer's woodland gilia	K
<i>Sedum niveum</i>	Davidson's stonecrop	K
<i>Sidotheca emarginata</i>	White margin oxytheca	K
<i>Streptanthus campestris</i> <sup>3</sup>	Southern jewel flower	K
<b>Cactus Springs B New</b>		
<i>Calochortus palmeri</i> var. <i>munzii</i>	Munz's mariposa lily	K
<i>Dieteria canescens</i> var. <i>ziegleri</i> (formerly <i>Machaeranthera</i> )	Ziegler's tansy aster	K
<i>Heuchera hirsutissima</i>	Shaggyhair alumroot	K
<i>Lilium parryi</i>	Lemon lily	K
<i>Sidotheca emarginata</i>	White margin oxytheca	K
<b>Cucamonga B</b>		
<i>Monardella australis</i> ssp. <i>jokersti</i> <sup>2</sup>	Jokerst's monardella	K

Table 11. Sensitive Plant Occurrences by Inventoried Roadless Area		
Sensitive Plants Known in IRAs	Common Name	Occurrence
<i>Streptanthus bernardinus</i> <sup>1, 3</sup>	Laguna Mountains jewelflower	K
<b>Pyramid Peak A</b>		
<i>Boechera johnstonii</i>	Johnston's rockcress	K
<i>Penstemon californicus</i>	California penstemon	K
<b>Raywood Flat B</b>		
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i> <sup>3</sup>	Rock sandwort	K
<i>Botrychium crenulatum</i> <sup>3</sup>	Scalloped moonwort	K
<i>Calochortus plummerae</i> <sup>1</sup>	Plummer's mariposa lily	K
<i>Castilleja lasiorhyncha</i>	San Bernardino Mountains owl's clover	H
<i>Gilia leptantha</i> ssp. <i>leptantha</i>	San Bernardino gilia	H
<i>Heuchera parishii</i>	Parish's alumroot	H
<i>Lilium parryi</i>	Lemon lily	K
<i>Parnassia cirrata</i> var. <i>cirrata</i> <sup>3</sup>	Fringed grass-of-parnassus	K
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	Parish's checkerbloom	H
<b>Shared by Angeles and Los Padres National Forests</b>		
<b>Sespe-Frazier IRA</b>		
<i>Calochortus clavatus gracilis</i>	slender mariposa lily	K
<i>Calochortus clavatus clavatus</i> <sup>2</sup>	club-haired mariposa lily	K
<i>Opuntia basilaris brachyclada</i>	short-jointed beavertail	K
<sup>1</sup> Proposed for removal on 2012 Sensitive plant list <sup>2</sup> Proposed for addition to 2012 Sensitive plant list – being treated as Sensitive for this evaluation. <sup>3</sup> Forest botanist provided knowledge in the 2012 IRA SEIS Wilderness Evaluations  <u>Occurrence</u> K=Known from the IRA (Data source unless otherwise noted: USFS NRM TESP database 8/30/2012) H= Historic occurrence that may still be present (source is 2012 Wilderness Evaluation)		

<b>Table 12. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs</b>			
<b>Inventoried Roadless Area, Sensitive Species <sup>1</sup></b>	<b>Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup></b>		
	<b>Alternative 1 (No Action)</b>	<b>Alternative 2 (Proposed Action)</b>	<b>Alternative 3 (RW Emphasis)</b>
<b>Angeles</b>			
<b>Westfork IRA</b>	<i>LUZs with Occurrences:</i> BC	<i>LUZs with Occurrences:</i> BC <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> BC <i>Comparison:</i> Same as Alternative 1
<i>Lepechinia fragrans</i>	0.08 acres BC	0.08 acres BC	0.08 acres BC
<b>Cleveland</b>			
<b>Barker Valley IRA</b>	<i>LUZs with Occurrences:</i> BC, Mostly BCMUR, BCNM	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, Mostly RW <i>Comparison:</i> More RW than Alternative 1	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, Mostly RW <i>Comparison:</i> Same as Alternative 2
<i>Astragalus oocarpus</i>	0.12 acres BCNM	0.12 acres RW	0.12 acres RW
<i>Brodiaea orcuttii</i>	53.55 acres BCMUR	17.35 acres BCMUR 36.20 acres RW	17.35 acres BCMUR 36.20 acres RW
<i>Caulanthus simulans</i>	2.12 acres BC 3.87 acres BCNM	2.12 acres BC 3.87 acres RW	2.12 acres BC 3.87 acres RW
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	0.04 acres BCNM	0.04 acres RW	0.04 acres RW
<i>Limnanthes alba</i> var. <i>parishi</i> ( <i>Limnanthes gracilis</i> var. <i>parishi</i> )	0.04 acres BC 64.83 acres BCMUR	0.01 acres BC 10.17 acres BCMUR 54.69 acres RW	0.01 acres BC 10.17 acres BCMUR 54.69 acres RW
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.68 acres BCNM	6.68 acres RW	6.68 acres RW
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	5.58 acres BC 3.72 acres BCMUR 68.96 acres BCNM	5.58 acres BC 6.84 acres BCNM 65.83 acres RW	5.58 acres BC 6.84 acres BCNM 65.83 acres RW
<b>Caliente IRA</b>	<i>LUZs with Occurrences:</i> BCNM	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> More RW than Alternative 1	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> Same as Alternative 2
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.66 acres BCNM	6.66 acres RW	6.66 acres RW
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New IRA</b>	<i>LUZs with Occurrences:</i> BC, BCNM	<i>LUZs with Occurrences:</i> BCMUR, RW	<i>LUZs with Occurrences:</i> BCMUR, RW

Table 12. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs			
Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
		<i>Comparison:</i> More BCMUR and RW than Alternative 1	<i>Comparison:</i> Same as Alternative 2
<i>Astragalus deanii</i>	0.35 acres BCNM	0.35 acres BCMUR	0.35 acres BCMUR
<i>Clarkia delicate</i>	0.32 acres BC	0.32 acres RW	0.32 acres RW
<b>Coldwater IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, RW <i>Comparison:</i> More RW than Alternative 1 or 2
<i>Calochortus weedii</i> var. <i>intermedius</i>	2.39 acres BC 0.04 acres BCNM	2.39 acres BC 0.04 acres BCNM	2.39 acres BC 0.04 acres RW
<i>Chorizanthe parryi</i> var. <i>parryi</i>	0.12 acres BC	0.12 acres BC	0.12 acres BC
<i>Lepechinia cardiophylla</i>	7.11 acres BC 0.07 acres BCMUR 8.42 acres BCNM	7.11 acres BC 0.07 acres BCMUR 8.42 acres BCNM	7.11 acres BC 0.07 acres BCMUR 1.29 acres BCNM 7.13 acres RW
<i>Monardella macrantha</i> ssp. <i>hallii</i>	7.22 acres BCNM	7.22 acres BCNM	7.22 acres RW
<i>Phacelia keckii</i>	48.95 acres BCNM	48.95 acres BCNM	48.95 acres RW
<b>Eagle Peak IRA</b>	<i>LUZs with Occurrences:</i> BCMUR, BCNM	<i>LUZs with Occurrences:</i> BCMUR, BCNM, RW <i>Comparison:</i> More RW than Alternative 1	<i>LUZs with Occurrences:</i> BCMUR, BCNM, RW <i>Comparison:</i> Same as Alternative 2
<i>Astragalus oocarpus</i>	16.95 acres BCMUR 13.09 acres BCNM	17.70 acres BCMUR 4.76 acres BCNM 8.58 RW	17.70 acres BCMUR 4.76 acres BCNM 8.58 acres RW
<b>Ladd IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, <i>Comparison:</i> Same as Alternative 2
<i>Calochortus weedii</i> var. <i>intermedius</i>	0.15 acres BC 1.64 acres BCMUR	1.64 acres BCMUR 0.31 acres BCNM	1.64 acres BCMUR 0.31 acres BCNM



Table 12. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs			
Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
	0.15 acres BCNM		
<i>Lepichinia cardiophylla</i>	7.24 acres BC 15.14 acres BCNM	22.38 acres BCNM	22.38 acres BCNM
<i>Phacelia keckii</i>	1.06 acres BC	1.06 acres BC	1.06 acres BC
<b>Sill Hill IRA</b>	BCNM, CB , DAI	CB & DAI same, some RW	DAI same as 1, 2. CB to RW Most RW
<i>Brodiaea orcuttii</i>	13.40 acres BCNM 67.50 acres CB	67.50 acres CB 13.40 RW	80.89 acres RW
<i>Calochortus dunnii</i>	16.08 acres CB	16.08 acres CB	16.08 acres RW
<i>Hesperocyparis stephensonii</i> ( <i>Cupressus arizonica</i> ssp. <i>a.</i> )	26.56 acres BCNM 167.48 acres CB 20.61 acres DAI	167.48 acres CB 20.61 acres DAI 26.56 acres RW	194.04 RW 20.61 DAI
<i>Thermopsis californica</i> var. <i>semota</i>	5.73 acres BCNM	5.26 acres RW 0.47 acres BCNM	5.73 acres RW
<b>Trabuco IRA</b>	LUZs with Occurrences: BC, BCNM, DAI	LUZs with Occurrences: BC, BCNM <i>Comparison:</i> Less BC, more BCNM, and no DAI than Alternative 1	LUZs with Occurrences: RW, BC <i>Comparison:</i> DAI same as Alternative 2 (none); More RW than Alternatives 1 or 2
<i>Dudleya viscida</i>	5.25 acres DAI	5.25 acres BCNM	5.25 acres RW
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	6.99 acres BCNM	6.99 acres BCNM	6.99 acres RW
<i>Lepechinia cardiophylla</i>	45.28 acres BC 55.87 acres BCNM	0.08 acres BC 101.07 acres BCNM	0.08 acres BC 101.07 acres RW
<i>Nolina cismontana</i>	137.38 acres BCNM	137.38 acres BCNM	137.38 acres RW
<i>Phacelia keckii</i>	0.05 acres BC	0.05 acres BC	0.05 acres RW
<i>Satureja chandleri</i>	264.52 acres BCNM	264.52 acres BCNM	264.52 acres RW
<i>Tetracoccus dioicus</i>	6.50 acres BCNM	6.50 acres BCNM	6.50 acres RW
<b>Upper San Diego River IRA</b>	LUZs with Occurrences:	LUZs with Occurrences:	LUZs with Occurrences:

Table 12. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs			
Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
	BCNM, CB	BCMUR, CB, BCNM <i>Comparison:</i> Same as Alternative 1	BCMUR, RW <i>Comparison:</i> RW is higher than Alternatives 1 or 2. BCMUR is the same.
<i>Astragalus deanii</i>	14.39 acres BCNM	14.39 acres BCMUR	14.39 acres BCMUR
<i>Clarkia delicata</i>	2.47 acres BCNM	2.47 acres RW	2.47 acres RW
<b>Los Padres</b>			
<b>Dry Lakes IRA</b>	<i>LUZs with Occurrences:</i> DAI	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1
<i>Calochortus weedii</i> var. <i>vestus</i>	0.08 acres DAI	0.08 acres DAI	0.08 acres DAI
<b>Sawmill – Badlands IRA</b>	<i>LUZs with Occurrences:</i> DAI	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1
<i>Navarretia peninsularis</i>	0.08 acres DAI	0.08 acres DAI	0.08 acres DAI
<b>Sespe – Frazier IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM	<i>LUZs with Occurrences:</i> BCNM, BCMUR <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> RW, BCNM <i>Comparison:</i> More RW than Alternatives 1 and 2
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	0.08 acres BCMUR	0.08 acres BCNM	0.08 acres RW
<i>Calochortus palmeri</i> var. <i>palmeri</i>	0.08 acres BC 0.08 acres BCNM	0.16 acres BCNM	0.16 acres RW
<i>Fritillaria ojaiensis</i>	0.23 acres BCNM	0.23 acres BCNM	0.23 acres RW
<i>Monardella linoides</i> ssp. <i>oblonga</i>	0.08 acres BC	0.08 acres BCNM	0.08 acres BCNM
<i>Navarretia peninsularis</i>	0.08 acres BC	0.08 acres BCNM	0.08 acres BCNM
<b>White Ledge IRA</b>	<i>LUZs with Occurrences:</i> BCNM	<i>LUZs with Occurrences:</i> BCNM <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> Same as Alternative 1
<i>Streptanthus campestris</i>	0.08 acres BCNM	0.08 acres BCNM	0.08 acres RW

Table 12. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs			
Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
<b>San Bernardino</b>			
<b>Cactus Springs B IRA</b>	<i>LUZs with Occurrences:</i> BC	<i>LUZs with Occurrences:</i> BCNM, BC, less BC, BCNM <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> RW, BC <i>Comparison:</i> More RW than Alternatives 1 or 2; same BC as Alternative 2
<i>Astragalus bicristatus</i>	0.18 acres BC	0.18 acres BCNM	0.18 acres RW
<i>Calochortus palmeri</i> var. <i>munzii</i>	15.90 acres BC	15.90 acres BCNM	15.90 acres RW
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	0.24 acres BC	0.24 acres BCNM	0.24 acres RW
<i>Dieteria canescens</i> var. <i>ziegleri</i> ( <i>Machaeranthera</i> )	0.15 acres BC	0.15 acres BC	0.15 acres BC
<i>Draba corrugata</i> var. <i>saxosa</i>	0.18 acres BC	0.18 acres BCNM	0.18 acres RW
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	0.64 acres BC	0.14 acres BC 0.51 acres BCNM	0.14 acres BC 0.51 acres RW
<i>Heuchera hirsutissima</i>	0.72 acres BC	0.18 acres BC 0.54 acres BCNM	0.18 acres BC 0.54 acres RW
<i>Lilium parryi</i>	0.23 acres BC	0.23 acres BCNM	0.23 acres RW
<i>Saltugilia latimeri</i>	0.38 acres BC	0.38 acres BCNM	0.38 acres RW
<i>Sedum niveum</i>	0.08 acres BC	0.08 acres BCNM	0.28 acres RW
<i>Sidothea emarginata</i>	0.99 acres BC	0.26 acres BC 0.73 acres BCNM	0.26 acres BC 0.73 acres RW
<b>Cactus Springs B New IRA</b>	<i>LUZs with Occurrences:</i> BC	<i>LUZs with Occurrences:</i> BC, BCNM <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> BC, RW <i>Comparison:</i> Same BC as 2, More RW than Alternative 1 or 2
<i>Calochortus palmeri</i> var. <i>munzii</i>	0.16 acres BC	0.16 acres BCNM	0.16 acres RW
<i>Dieteria canescens</i> var. <i>ziegleri</i>	0.38 acres BC	0.38 acres BCNM	0.38 acres RW

Table 12. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs			
Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
<i>Heuchera hirsutissima</i>	1.32 acres BC	1.32 acres BCNM	1.32 acres RW
<i>Lilium parryi</i>	0.06 acres BC	0.06 acres BC	0.06 acres BC
<i>Sidothea emarginata</i>	0.54 acres BC	0.54 acres BCNM	0.54 acres RW
<b>Pyramid Peak A IRA</b>	<i>LUZs with Occurrences:</i> BC, RW	<i>LUZs with Occurrences:</i> BCNM, RW <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> More RW than Alternative 1 or 2
<i>Boechera johnstonii</i>	5.08 acres BC 8.37 acres RW	5.08 acres BCNM 8.37 acres RW	13.44 acres RW
<i>Penstemon californicus</i>	6.18 acres BC 8.56 acres RW	6.18 acres BCNM 8.56 acres RW	14.74 acres RW
<b>Raywood Flat B IRA</b>	<i>LUZs with Occurrences:</i> BCMUR, BCNM	<i>LUZs with Occurrences:</i> BCMUR, BCNM <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> BCMUR, RW <i>Comparison:</i> Same as Alternative 1
<i>Calochortus plummerae</i> <sup>3</sup>	0.31 acres BCNM	0.31 acres BCNM	0.31 acres RW
<i>Lilium parryi</i>	0.10 acres BCMUR	0.10 acres BCMUR	0.10 acres BCMUR
<sup>1</sup> IRAs not listed above have no USFS NRM TESP data available at this time. <sup>2</sup> Data source: USFS NRM TESP 8/30/12 <sup>3</sup> Proposed for removal from the Regional Forester's Sensitive species list 2012.			

Table 13. Acreages of Mapped Sensitive Plants in IRAs by Species <sup>1</sup>				
Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)	Total
<i>Acanthoscyphus parishi</i> var. <i>abramsii</i>	0.08 BCMUR	0.08 BCMUR	0.08 RW	0.08
<i>Astragalus bicristatus</i>	0.18 BC	0.18 BCNM	0.18 RW	0.18
<i>Astragalus deanii</i>	0.35 BCNM	0.35 BCMUR	0.35 BCMUR	14.74
	14.39 BCNM	14.39 BCMUR	14.39 BCMUR	
<i>Astragalus oocarpus</i>	0.12 BCNM	0.12 RW	0.12 RW	31.16
	16.95 BCMUR	17.70 BCMUR	17.70 BCMUR	
	13.09 BCNM	4.76 BCNM	4.76 BCNM	
		8.58 RW	8.58 RW	
<i>Boechera johnstonii</i>	5.08 BC	5.08 BCNM	13.44 RW	13.44
	8.37 RW	8.37 RW		
<i>Brodiaea orcuttii</i>		36.20 RW	36.20 RW	134.45
	53.55 BCMUR	17.35 BCMUR	17.35 BCMUR	
	13.40 BCNM	67.50 CB	80.89 RW	
	67.50 CB	13.40 RW		
<i>Calochortus dunnii</i>	16.08 CB	16.08 CB	16.08 CB to RW	16.08
<i>Calochortus palmeri</i> var. <i>munzii</i>	15.90 BC	15.90 BCNM	15.90 RW	16.06
	0.16 BC	0.16 BCNM	0.16 RW	
<i>Calochortus palmeri</i> var. <i>palmeri</i>	0.08 BC	0.15 BCNM	0.15 RW	0.15
	0.08 BCNM			
<i>Calochortus plummerae</i> <sup>3</sup>	0.31 BCNM	0.31 BCNM	0.31 RW	0.31
<i>Calochortus weedii</i> var. <i>intermedius</i>	2.39 BC	2.39 BC	2.39 BC	4.37
	0.04 BCNM	0.04 BCNM	0.04 RW	
	0.15 BC	1.64 BCMUR	1.64 BCMUR	
	1.64 BCMUR	0.31 BCNM	0.31 BCNM	
	0.15 BCNM			
<i>Calochortus weedii</i> var. <i>vestus</i>	0.08 DAI	0.08 DAI	0.08 DAI	0.08
<i>Caulanthus simulans</i>	2.12 BC	2.12 BC	2.12 BC	5.99

Table 13. Acreages of Mapped Sensitive Plants in IRAs by Species <sup>1</sup>				
Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)	Total
	3.87 BCNM	3.87 RW	3.87 RW	
<i>Chorizanthe parryi</i> var. <i>parryi</i>	0.12 BC	0.12 BC	0.12 BC	0.12
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> <sup>3</sup>	0.04 BCNM	0.04 RW	0.04 RW	0.04
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> <sup>2</sup>	0.24 BC	0.24 BCNM	0.24 RW	0.24
<i>Clarkia delicata</i> <sup>3</sup>	0.32 BC	0.32 RW	0.32 RW	2.79
	2.47 BCNM	2.47 RW	2.47 RW	
<i>Dieteria canescens</i> var. <i>ziegleri</i> ( <i>Machaeranthera</i> )	0.38 BC	0.38 BCNM	0.38 RW	0.53
	0.15 BC	0.15 BC	0.15 BC	
<i>Draba corrugata</i> var. <i>saxosa</i>	0.18 BC	0.18 BCNM	0.18 RW	0.18
<i>Dudleya viscida</i>	5.25 DAI	5.25 BCNM	5.25 RW	5.25
<i>Fritillaria ojaiensis</i>	0.23 BCNM	0.23 BCNM	0.23 RW	0.23
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	0.64 BC	0.14 BC	0.14 BC	0.64
		0.51 BCNM	0.51 RW	
<i>Hesperocyparis stephensonii</i> ( <i>Cupressus arizonica</i> ssp. <i>a.</i> )	167.48 CB	26.56 RW		214.65
	26.56 BCNM	167.48 CB	194.04 RW	
	20.61 DAI	20.61 DAI	20.61 DAI	
<i>Heuchera hirsutissima</i>	0.72 BC	0.18 BC	0.18 BC	2.04
		0.54 BCNM	0.54 RW	
	1.32 BC	1.32 BCNM	1.32 RW	
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	6.99 BCNM	6.99 BCNM	6.99 RW	6.99
<i>Lepechinia cardiophylla</i>	45.28 BC	0.08 BC	0.08 BC	139.13
	55.87 BCNM	101.07 BCNM	101.07 RW	
	7.11 BC	7.11 BC	7.11 BC	
	0.07 BCMUR	0.07 BCMUR	0.07 BCMUR	

Table 13. Acreages of Mapped Sensitive Plants in IRAs by Species <sup>1</sup>				
Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)	Total
	8.42 BCNM	8.42 BCNM	1.29 BCNM	
			7.13 RW	
	7.24 BC	22.38 BCNM	22.38 BCNM	
	15.14 BCNM			
<i>Lepechinia fragrans</i>	0.08	0.08	0.08	0.08
<i>Lilium parryi</i>	0.23 BC	0.23 BCNM	0.23 RW	0.39
	0.06 BC	0.06 BC	0.06 BC	
	0.10 BCMUR	0.10 BCMUR	0.10 BCMUR	
<i>Limnanthes alba</i> var. <i>parishi</i>	0.04 BC	0.01 BC	0.01 BC	64.87
	64.83 BCMUR	10.17 BCMUR	10.17 BCMUR	
		54.69 RW	54.69 RW	
<i>Monardella linoides</i> ssp. <i>oblonga</i>	0.08 BC	0.08 BCNM	0.08 BCNM	0.08
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.68 BCNM	6.68 RW	6.68 RW	20.56
	6.66 BCNM	6.66 RW	6.66 RW	
	7.22 BCNM	7.22 BCNM	7.22 RW	
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	5.58 BC	5.58 BC	5.58 BC	78.26
	3.72 BCMUR	6.84 BCNM	6.84 BCNM	
	68.96 BCNM	65.83 RW	65.83 RW	
<i>Navarretia peninsularis</i>	0.08 DAI	0.08 DAI	0.08 DAI	0.16
	0.08 BC	0.08 BCNM	0.08 BCNM	
<i>Nolina cismontana</i>	137.38 BCNM	137.38 BCNM	137.38 RW	137.38
<i>Penstemon californicus</i>	6.18 BC	6.18 BCNM	14.74 RW	14.74
	8.56 RW	8.56 RW		
<i>Phacelia keckii</i>	48.95 BCNM	48.95 BCNM	48.95 RW	50.06
	1.06 BC	1.06 BC	1.06 BC	
	0.05 BC	0.05 BC	0.05 RW	
<i>Saltugilia latimeri</i>	0.38 BC	0.38 BCNM	0.38 RW	0.38

Table 13. Acreages of Mapped Sensitive Plants in IRAs by Species <sup>1</sup>				
Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)	Total
<i>Satureja chandleri</i>	264.52 BCNM	264.52 BCNM	264.52 RW	264.52
<i>Sedum niveum</i>	0.08 BC	0.08 BCNM	0.28 RW	0.08
<i>Sidothea emarginata</i>	0.99 BC	0.26 BC	0.26 BC	1.53
		0.73 BCNM	0.73 RW	
	0.54 BC	0.54 BCNM	0.54 RW	
<i>Streptanthus campestris</i>	0.08 BCNM	0.08 BCNM	0.08 RW	0.08
<i>Tetracoccus dioicus</i>	6.50 BCNM	6.50 BCNM	6.50 RW	6.5
<i>Thermopsis californica</i> var. <i>semota</i>	5.73 BCNM	0.47 BCNM 5.26 RW	5.73 RW	5.73
<sup>1</sup> Acreages are only available for the occurrences in the Forest Service NRIS database. Other known occurrences that are not mapped in the database are not displayed. <sup>2</sup> Proposed for addition to the Regional Forester's Sensitive list in 2012. Being considered as Sensitive for the purposes of this evaluation. <sup>3</sup> Proposed for removal from the Regional Forester's Sensitive species list 2012.				



The analysis of effects assumes that the viability assessments and effects determinations developed for the FEIS (USDA Forest Service 2006) are the baseline for Alternative 1 (No Action). See the Environmental Consequences sections in the 2006 FEIS for discussions of expected effects and viability assessments for Sensitive plants that were associated with the selected alternative. See the Biological Evaluation and viability assessments in the FEIS (USDA Forest Service 2006 - Project Record and Reading Room). Those discussions provide the basis for this evaluation and they are incorporated here by reference.

*Alternative 1 (No Action):* The analyses in the 2006 biological reports in the Project Record of the 2006 LMP relative to the effects expected to botanical resources from the selected alternative are the same as Alternative 1 (No Action) for this proposal. Those reports that address the following Sensitive plant species are incorporated here by reference.

### **III-2.1 – *Acanthoscyphus parishii* var. *abramsii* (Abram’s Oxytheca; Abram’s Flowery Puncturebract)**

*Species Information:* *Acanthoscyphus parishii* var. *abramsii* occurs in the southern outer South Coast Ranges and Western Transverse Ranges in Santa Barbara and Ventura Counties. *Acanthoscyphus parishii* var. *abramsii* is a dicot in the buckwheat family (Polygonaceae). It typically blooms between June and August. *Acanthoscyphus parishii* var. *abramsii* grows in chaparral on soils derived from sandy or shale substrates at elevations of 3,750–6,750 feet (1,150–2,060 meters). The habitat of *Acanthoscyphus parishii* var. *abramsii* has been described as "open, gravelly or sandy slopes."

*Occurrences in IRAs:* This species is known to occur on the LPNF in the Sespe-Frazier IRA. There are 0.08 acres of mapped habitat, currently in BCMUR.

*Potential Effects:* Under Alternatives 1 and 2, the zoning of the 0.08 acres of occupied habitat for this species would remain the same. Under Alternative 3, the occupied habitat would be re-zoned as RW. Under the current conditions, effects to this species are likely to be relatively low due to motorized use being restricted. Under Alternative 3, the potential for effects due to motorized vehicles and recreational use may be further reduced.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has potential to be the most beneficial for this species.

### **III-2.2– *Allium howellii* var. *clokeyi* (Mount Pinos Onion)**

*Species Information:* *Allium howellii* var. *clokeyi* is found in the western Transverse Range of Los Angeles County (Castaic Canyon) and in Ventura and Santa Barbara counties. *Allium howellii* var. *clokeyi* occurs at numerous locations on the LPNF including Hurricane Deck, Ballinger Canyon, upper Quatal Canyon, and most of the other canyons of the upper Cuyama River watershed, east to Lockwood Valley and the headwaters of Piru Creek. *Allium howellii* var. *clokeyi* is also reported from the middle reaches of Piru Creek near Hardluck Campground.

*Allium howellii* var. *clokeyi* is a monocot in the lily family (Liliaceae). *Allium howellii* var. *clokeyi* is a perennial bulb that reproduces by seed and by the production of daughter bulbs.

*Allium howellii* var. *clokeyi* is found growing in openings of sagebrush scrub and pinyon/juniper woodland at elevations of 4,265–6,070 feet (1,300–1,850 meters). Soils are 'loamy' at Ballinger Canyon, but Mount Pinos onion is typically found on Lockwood clay and the loamy soils at Ballinger Canyon may also be Lockwood Clay. Near Hardluck Campground, *Allium howellii* var. *clokeyi* grows in a seepy area with soils that are more-or-less saline. *Allium howellii* var. *clokeyi* is also reported to occur on serpentine soils.

*Occurrences in IRAs:* While this species is known from the Sespe-Frazier IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 94% of the Sespe-Frazier IRA would be BCNM, CB, RW, or EW. Under Alternative 3, 95% of the IRA would be in those same categories (with 41% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects from Alternative 2 or 3 may be beneficial.

### **III-2.3 – *Arctostaphylos pilosula* (Santa Margarita Manzanita)**

*Species Information:* *Arctostaphylos pilosula* is endemic to San Luis Obispo County and is distributed in widely scattered locations from the ridges and slopes of the southern Santa Lucia Mountains and the La Panza Range to the low hills located between San Luis Obispo and Arroyo Grande. It ranges from Pine Mountain/Ocean View Mine in northern San Luis Obispo County to Indian Knob, just south of San Luis Obispo. It has also been reported from the Cypress Mountain area east of Paso Robles though this location needs to be verified. *Arctostaphylos pilosula* is found on the LPNF at two locations, both in the La Panza Range: one on Pozo Summit and another on the jeep trail from Pozo Summit to Pine Mountain. A third occurrence east of Pozo is also likely to be on NFS lands and several occurrences near Lopez Lake are within a few miles of NFS lands. A collection by Clare Hardham from Pozo – Hi Mountain may also be located on the LPNF.

*Arctostaphylos pilosula* is a dicot in the heath family (Ericaceae). *Arctostaphylos pilosula* is an evergreen shrub that blooms December–March. It does not form burls but reproduces from seed; therefore, periodic fire is necessary for regenerating stands. *Arctostaphylos pilosula* is associated with chamise chaparral and manzanita chaparral habitats and sometime with closed cone conifers. *Arctostaphylos pilosula* occurs on various sedimentary substrates, including shale and sandstone, but it has also been reported from weathered granite and serpentinite.

*Occurrences in IRAs:* While this species is known from the Machesna Mountain and Black Mountain IRAs (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 96% of the Machesna IRA would be BCNM or EW. Under Alternative 3, 99% of the Machesna IRA would be in EW or RW. Under Alternative 2, 92% of the Black Mountain IRA would be BCNM. Under Alternative 3, 95% of the Black Mountain IRA would be in RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, it is = likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.4 – *Arctostaphylos refugioensis* (Refugio Manzanita)**

*Species Information:* *Arctostaphylos refugioensis* is endemic to the Santa Ynez Mountains of Santa Barbara County. Occurrences range from above Canada del Cojo near Lompoc to San Pedro Canyon near San Marcos Pass. There are twelve occurrences of *Arctostaphylos refugioensis* within the boundaries of the LPNF. Four of these occurrences are entirely on private in-holdings, and three are partly on NFS lands and partly on private land. Five occurrences are entirely located on NFS lands.

*Arctostaphylos refugioensis* is a dicot in the heath family (Ericaceae). *Arctostaphylos refugioensis* is a tall, erect, evergreen shrub that grows to 16 feet (5 m) tall, 6.5-11.5 feet (2-3.5 m) wide, and lacks a basal burl. This species blooms from December to May and produces round berries with a solid stone. Fire appears to be needed for regeneration. This species appears to be resilient to the effects of wildfire provided fire does not occur too frequently. Time is needed for this obligate seeder to regenerate a new stand; otherwise the plant's seed bank may become depleted and insufficient in size to provide for the regeneration of the stand.

*Arctostaphylos refugioensis* grows on south-facing slopes and ridgelines in areas of sandstone within chaparral or chaparral mixed with woodland at elevations of 900–2,400 feet (275–1,000 meters).

*Occurrences in IRAs:* While this species is known from the Tequepis IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 74% of the Tequepis IRA would be BCNM. Under Alternative 3, 87% of the IRA would be in RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.5 – *Arenaria lanuginosa* ssp. *saxosa* (Rock Sandwort)**

*Species Information:* *Arenaria lanuginosa* ssp. *saxosa* occurs in the San Bernardino Mountains and also the Sierra San Pedro Martir in Baja California. The range of *Arenaria lanuginosa* ssp. *saxosa* extends to the sky islands and mountain ranges in Utah, Colorado, Arizona, New Mexico, Texas, and Mainland Mexico. This taxon is rare in the San Bernardino Mountains and uncommon throughout its known range. All known occurrences of *Arenaria lanuginosa* ssp. *saxosa* in California are on the SBNF. Occurrence locations include Fish Creek, Lost Creek, the upper Santa Ana River Canyon, and South Fork Santa Ana River on the north slope of San Geronio, and Vivian Creek on the south slope.

*Arenaria lanuginosa* ssp. *saxosa* is a perennial dicotelydon in the pink family (Caryophyllaceae). This species flowers from July-August. *Arenaria lanuginosa* ssp. *saxosa* inhabits moist, sandy soil, usually along streams, between 1800 and 2600 meters. Occurrences range from moist areas to dry shaded areas in montane conifer forest. Montane conifer forest is widespread within the southern California National Forests; however, stream-sides and mesic areas are more narrowly distributed.

*Occurrences in IRAs:* While this species is known from the Raywood Flat-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Raywood Flat-B IRA would be BCNM, RW, or EW. Under Alternative 3, 92% of the IRA would be in those same categories (with 91% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects from Alternative 2 or 3 may be beneficial.

### **III-2.6 – *Astragalus bicristatus* (Crested Milk-Vetch)**

*Species Information:* *Astragalus bicristatus* is endemic to the mountains of Los Angeles, Riverside, and San Bernardino counties. Occurrences are known from the San Bernardino, Santa Rosa, and eastern San Gabriel Mountains. Most of the 28 documented occurrences of *Astragalus bicristatus* are from San Bernardino County, but several records lack specific location information. Most, perhaps all, of these occurrences are associated with carbonate soils. This species is known from the SBNF and has potential to occur on the ANF.

*Astragalus bicristatus* is a dicotelydon in the legume family (Fabaceae). *Astragalus bicristatus* is found in sandy or rocky places within lower and upper montane conifer forests between 5,800-9,000 feet elevation, primarily if not entirely on carbonate soils. On the SBNF, plants occur on carbonate-derived gravelly or loamy to sandy soils and on rocky or pebbly slopes.

*Occurrences in IRAs:* This species is known to occur on the SBNF in the Cactus Springs-B IRA. There are 0.18 acres of mapped habitat, all currently in BC.

*Potential Effects:* Under the No Action alternative, the zoning of the occupied habitat for this species would remain the same. It would change to BCNM under Alternative 2 and RW under Alternative 3. Under the current conditions, the occurrences in BC may be at some risk of effects associated with recreation activities and motorized vehicle use. The potential for effects due to motorized vehicles and recreational use may be lessened under Alternative 2 and further reduced under Alternative 3.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.7 – *Astragalus deanii* (Dean's Milk-Vetch)**

*Species Information:* *Astragalus deanii*, Dean's milk vetch, is known only from the southwestern Peninsular Ranges of San Diego County. *Astragalus deanii* is a perennial herbaceous locoweed with coarse hairs. Plants flower from March through May. *Astragalus deanii* occurs in open chaparral, coastal sage scrub, riparian sandy washes, and on exposed slopes in coast live oak understories. It is found on undisturbed slopes in the shade of low-growing shrubs and also in road cuts and grazed areas, usually occurring between 243 and 2,178 feet (75-670 meters).

*Occurrences in IRAs:* This species is known to occur on the CNF in the Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, and Upper San Diego River IRAs. There are 14.74 acres of mapped habitat, all currently in BCNM.

*Potential Effects:* Under the No Action alternative, the BCNM zoning of the occupied habitat for this species would remain the same. It would change to BCMUR under Alternative 2 and Alternative 3. Under the current conditions, the effects to this species are likely to be low due to the BCNM zoning. The potential for effects due to motorized vehicles under permit may be increased under either Alternative 2 or Alternative 3. The potential and scope of effects would vary depending on the proximity of occurrences to the routes that would be gated for administrative use. If they are close to or in the roads, effects may continue. If they are not close to the administrative routes, the change from BCNM to BCMUR may not affect the species.

*Determination of Effects:* It is my determination that Alternatives 2 or 3 may affect individual plants but is not likely to lead toward a trend in federal listing for the species.

### **III-2.8 – *Astragalus oocarpus* (San Diego or Descanso Milk-Vetch)**

*Species Information:* *Astragalus oocarpus*, Descanso milkvetch, is endemic to the Peninsular Ranges of central San Diego County. Occurrences are located on or near Palomar, Cuyamaca, and Volcan mountains. *Astragalus oocarpus* is a stout herbaceous perennial in the pea family (Fabaceae). Plants flower from June through August. *Astragalus oocarpus* occurs in cismontane chaparral edges at the periphery of meadows and in chaparral openings and cismontane

woodlands at elevations between 2,000 and 5,000 feet (610- 1,520 meters). Plants are also found along roadsides and in moderately disturbed areas.

*Occurrences in IRAs:* This species is known to occur on 31.16 acres on the CNF in the Barker Valley and Eagle Peak IRAs. In the Eagle Peak IRA, there are 16.95 acres BCMUR and 13.09 acres of BCNM. There are additional 0.12 acres of BCNM in the Barker Valley IRA.

*Potential Effects:* Under the No Action alternative, the zoning of the occupied habitat (13.21 BCNM and 16.95 BCMUR) for this species would remain the same. Under Alternatives 2 and 3, 8.58 acres of BCNM would go to RW; the rest would be the same. The potential for effects due to motorized vehicles and recreational use may be decreased under either Alternative 2 or Alternative 3.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.9 – *Boechea johnstonii* (Johnston’s Rock Cress)**

*Species Information:* *Boechea johnstonii* is endemic to the southern San Jacinto Mountains in Riverside County. This species is known from occurrences distributed in two distinct population centers at Garner Valley and about four miles to the east on the Desert Divide. *Boechea johnstonii* is a dicotyledonous plant in the mustard family (Brassicaceae). This perennial plant grows in dry areas on clay and gravelly soils between 4,400 and 7,000 feet elevation (1350 and 2150 meters). Plants are found in openings within chaparral, often on benches and knolls, and at the edges of meadows, on granitic soils with Pleistocene, non-marine clay deposits.

*Occurrences in IRAs:* This species is known to occur on the SBNF in the Pyramid Peak-A IRA. There are 13.44 acres of mapped habitat. Currently, 5.08 acres are in BC and 8.37 in RW.

*Potential Effects:* Under the No Action alternative and Alternative 2, the zoning of the occupied habitat for this species would remain the same. Under Alternative 3, the 5.08 acres of occupied habitat currently in BC would be re-zoned as RW so that all 13.44 acres of occupied habitat would be RW. Under the current conditions, the occurrences in BC may be at some risk of effects associated with recreation activities and motorized vehicle use. Under Alternative 3, the potential for effects due to motorized vehicles and recreational use may be lessened.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.10 – *Botrychium crenulatum* (Scalloped Moonwort)**

*Species Information:* *Botrychium crenulatum* occurs at scattered locations throughout California, Oregon, and Washington, and east to Montana, Wyoming, and Utah. In California, *B. crenulatum* ranges from southern California north to the Inyo and Modoc National Forests. *Botrychium crenulatum* is well documented from collections in the San Gabriel Mountains at Lamel Spring

(ANF) and from South Fork Meadows in the San Bernardino Mountains (SBNF). There are also historical occurrences from Coldwater Canyon, Fern Canyon, and Big Meadows on the SBNF.

*Botrychium crenulatum* is a diploid fern in the adder's tongue family (Ophioglossaceae). This perennial rhizomatous herb produces fertile fronds in June and July. *Botrychium crenulatum* is a very cryptic plant that occurs in meadows, seeps, springs, and streambanks generally in shaded areas of montane coniferous forest at elevations of 4,900–10,750 feet (1,500–3,280 meters). *Botrychium crenulatum* requires very specific microhabitats, such as wet meadow areas that hold late season moisture. These microhabitats are narrowly distributed within the overall habitat assemblages. *Botrychium crenulatum* tends to occupy areas that are slightly wetter than *Botrychium simplex* and is generally found in areas near perennial surface water. *Botrychium* species tend to occupy well-drained moist, gravelly, sandy, or calcareous soils. They sometimes inhabit areas that have experienced historical disturbance (10-15 years prior), such as old roads, ski runs, railroad right-of-ways, and old pipelines. Soil disturbance may bring minerals, such as calcium, to the surface.

*Occurrences in IRAs:* While this species is known from the Raywood Flat-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Raywood Flat-B IRA would be BCNM, RW, or EW. Under Alternative 3, 92% of the IRA would be in those same categories (with 91% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.11 – *Brodiaea orcuttii* (Orcutt's Brodiaea)**

*Species Information:* *Brodiaea orcuttii*, Orcutt's brodiaea, is endemic to the Peninsular Ranges of San Diego and southern Riverside counties and Baja California, Mexico. It may also occur in San Bernardino and Orange Counties. *Brodiaea orcuttii* is an herbaceous perennial from a subglobose corm. *Brodiaea orcuttii* occurs along drainages and vernal wet areas in needlegrass grasslands, closed-cone coniferous forest, cismontane woodlands, chaparral, and meadow habitats below 1615 meters (5300 feet). It is associated with clay, serpentine, and gravelly loam soils. Plants thrive in full sun in the presence of seasonal standing water for a short period of time in seeps, vernal pools, and depressions and may require drying of the soils during plant dormancy.

*Occurrences in IRAs:* This species is known to occur on the CNF. There are 134.45 acres of mapped occupied habitat in the Barker Valley (53.55 acres) and Sill Hill (80.9 acres) IRAs.

*Potential Effects:* Under Alternative 1, none of the land use zoning would change for the known occurrences of this species (53.55 acres BCMUR, 13.4 acres BCNM, and 67.50 acres CB). Under Alternative 2, 36.2 acres of the BCMUR would be changed to RW for a total of 49.6 acres of RW. The other acres/zoning would remain unchanged. Under Alternative 3, the 67.5 acres of CB would change to RW for a total of 117.09 acres of RW. The potential for effects due to motorized vehicles and recreational use may be lessened under Alternative 2 and further reduced under Alternative 3. The CB zone change to RW would normally result in camping being a suitable use; however, since it would continue to be managed as the King Creek RNA and the occurrence is in the RNA, Alternative 3 is not expected to have negative effects to the species.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.12 – *Calochortus clavatus* ssp. *clavatus* (Club-Haired Mariposa Lily)**

*Species Information:* This species has been proposed by the ANF for addition to the Regional Forester's Sensitive species list. It may be considered Sensitive before the Record of Decision has been signed for this project; thus, it is being treated as Sensitive so that it would not be necessary to conduct another analysis later.

*Calochortus clavatus* var. *clavatus* is a perennial bulbiferous herb that blooms May to June. *Calochortus clavatus* var. *clavatus* is a member of the Liliaceae family and is one of five recognized varieties of club-haired mariposa lily that occur in California. *Calochortus clavatus* var. *clavatus* occurs in the South Outer South Coast Ranges, North Inner South Coast Ranges, and western Transverse Ranges in Los Angeles County, Santa Barbara County, San Luis Obispo County, and Ventura County. As of 2012, there are seven known occurrences on the LPNF, five occurrences adjacent to the LPNF, two occurrences within the ANF, and two occurrences adjacent to the ANF.

*Calochortus clavatus* var. *clavatus* is sometimes associated with serpentine soils and inhabits chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland at 75-1300 meter elevations.

*Occurrences in IRAs:* This species is known from the Fish Canyon, Red Mountain, Salt Creek, Sespe-Frazier, and Tule IRAs, all on the ANF. These occurrences are not mapped; thus, it is not possible to display acreages by LUZ.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Tule IRA would be BCNM. Under Alternative 2, 99% of the Red Mountain IRA would be BCNM. Under Alternative 2, 98% of the Fish Canyon IRA would be BCNM or RW.



Under Alternative 3, 98% of the IRA would be in RW. Under Alternatives 2 and 3, 97% of the Salt Creek IRA would be RW and BCNM (less than 1%). Under Alternative 3, 99% of the Red Mountain and Fish Canyon IRAs would be in RW.

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.13 – *Calochortus clavatus* ssp. *gracilis* (Slender Mariposa Lily)**

*Species Information:* *Calochortus clavatus* var. *gracilis* (Liliaceae) is a perennial bulbiferous herb that blooms in March-May. *Calochortus clavatus* var. *gracilis* is endemic to the southern foothills and canyons of the San Gabriel Mountains and the western Transverse Range, from the Liebre Mountains east to Claremont (near the San Bernardino County line). All recorded occurrences are in Los Angeles County. *Calochortus clavatus* var. *gracilis* occupies shaded foothill canyons on steep grassy slopes within chaparral and coastal sage scrub at elevations of 1,200-3,300 feet (360-1,000 meters).

*Occurrences in IRAs:* This species is known from the Fish Canyon, Red Mountain, Salt Creek, Sespe-Frazier, and Tule IRAs, all on the ANF. These occurrences are not mapped; thus, it is not possible to display acreages by LUZ.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Tule IRA would be BCNM. Under Alternative 2, 99% of the Red Mountain IRA would be BCNM. Under Alternative 2, 98% of the Fish Canyon IRA would be BCNM or RW.

Under Alternative 3, 98% of the IRA would be in RW. Under Alternatives 2 and 3, 97% of the Salt Creek IRA would be RW and BCNM (less than 1%). Under Alternative 3, 99% of the Red Mountain and Fish Canyon IRAs would be in RW.

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial for this species.

### **III-2.14 – *Calochortus dunnii* (Dunn’s Mariposa Lily)**

*Species Information:* *Calochortus dunnii*, Dunn’s mariposa lily, is present in the southern Peninsular Ranges from southern San Diego County and Baja California, Mexico. Within the southern California NFS lands, *Calochortus dunnii* is only known from the CNF. The CNF has 18 occurrence records for *Calochortus dunnii*. Plants occur on the West Fork King Creek, north of Morena Creek and Palomar, Barber and Guatay Mountains. *Calochortus dunnii* is a branched herbaceous perennial from a bulb. Like other *Calochortus* species, *C. dunnii* appears to be a fire follower, occupying early successional habitats following disturbance. *Calochortus dunnii* is associated with gabbro and metavolcanic soils or sandstone, in closed-cone coniferous forest, rocky openings in chaparral, and grassland/chaparral ecotones at elevations of 1,220–5,950 feet (375–1,830 meters).

*Occurrences in IRAs:* This species is known to occur on the CNF in the Sill Hill IRA. There are 16.08 acres of mapped occurrences; all are in CB.

*Potential Effects:* Under Alternatives 1 and 2, none of the land use zoning would change for the known occurrences of this species (16.08 acres CB). Under Alternative 3, all of the occupied habitat would be changed to RW. The CB zone change to RW would normally result in camping being a suitable use; however, since it would continue to be managed as the King Creek RNA and the occurrence is in the RNA, Alternative 3 is not expected to have negative effects to the species.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.15 – *Calochortus palmeri* var. *munzii* (Munz’s Mariposa Lily)**

*Species Information:* *Calochortus palmeri* var. *munzii* is endemic to the San Jacinto Mountains. Only four of the documented occurrences are in California Natural Diversity Database (2004), one of which is on private land in the Idyllwild area. Multiple occurrences are known from the San Jacinto Ranger District of the SBNF. Occurrences are generally distributed through the central and southern San Jacinto Mountains from Idyllwild to Keenwild, south through Garner Valley and the Thomas Mountain area to the junction of the PCT and Highway 74. *Calochortus palmeri* var. *munzii* is a monocotyledonous perennial plant in the lily family (Liliaceae). It is one of two varieties of *Calochortus palmeri*.

*Calochortus palmeri* var. *munzii* occurs in meadows, seeps, and vernal moist places in lower montane coniferous forests and chaparral at elevations of 3,900–7,200 feet (1,200–2,200 meters). This species occurs on exposed knolls in either shaded, yellow pine woodland, on seasonally moist, fine loams, chaparral on moist, sandy clay soils, or native grassland.

*Occurrences in IRAs:* There are 16.06 acres of mapped habitat for this species on SBNF in the Cactus Springs-B (15.90 acres BC) and Cactus Springs-B New (0.16 acres BC) IRAs, all in BC.

*Potential Effects:* Under Alternative 2, the 16.06 acres of mapped occurrences would change from BC to BCNM. Under Alternative 3, those acres would be RW. The potential for effects due to motorized vehicles and recreational use would be lessened under Alternative 2 and further reduced under Alternative 3.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.16 – *Calochortus palmeri* var. *palmeri* (Palmer’s Mariposa Lily)**

*Species Information:* *Calochortus palmeri* var. *palmeri* is sparsely distributed across central and southern California from the Tehachapi Mountains and the La Panza Range south to the San Rafael, San Gabriel, San Bernardino, San Jacinto, and Santa Rosa mountains.

On the LPNF, *Calochortus palmeri* var. *palmeri* has been confirmed to occur in the Sespe watershed near Chorro Grande Trail and on the north slope of Frazier Mountain near the Chuchupate Ranger Station. There are also reports that it occurs in eastern Lockwood Valley, along Derrydale Creek, above Juncal Dam in the Santa Ynez watershed, in the American Canyon watershed of the La Panza Range, along Mariana Creek near Pozo Summit, also in the La Panza Range, and above Manzana Creek (elevation 3,800 feet) on the White Ledge Trail in the San Rafael Mountains. However, these reports have not been confirmed by recent field visits. In 2001, an occurrence of *Calochortus palmeri* var. *palmeri* was discovered on Alamo Mountain in the Piru Creek watershed.

*Calochortus palmeri* var. *palmeri* is a monocot in the lily family (Liliaceae). *Calochortus palmeri* is separated into two varieties (*C. palmeri* var. *munzii* and *C. palmeri* var. *palmeri*). *Calochortus palmeri* var. *palmeri* is a slender, branched perennial. *Calochortus palmeri* var. *palmeri* appears to have an “endurer” life history strategy for coping with wildfire. When wildfire occurs, the current year’s crop of stems, flowers, fruits, and seeds are generally consumed by fire resulting in a loss of one year’s reproductive output. However, the affected plants typically live, the plant’s bulbs being sufficiently deep in the soil to survive most fire events.

*Calochortus palmeri* var. *palmeri* occurs in meadows, seeps, and vernal moist areas in chaparral, mixed conifer forest, and yellow pine forest at elevations of 3,300-7,200 feet.

*Occurrences in IRAs:* There are 0.16 acres of mapped occurrences in the Sespe-Frazier IRA (LPNF), with 0.8 in BC and 0.8 in BCNM. This species is also known from Garcia Mountain and Machesna Mountain IRAs (LPNF); however, the occurrences have not been mapped and no acreages are available.

*Potential Effects:* Under Alternative 1, the zoning (0.8 acres BC and 0.8 acres BCNM) and effects would remain the same. All 0.15 acres would be changed to BCNM under Alternative 2 and to RW under Alternative 3. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads in BCNM areas.

These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (for any activities that are not be allowed in RW).

For the occurrences in the Garcia Mountain and Machesna Mountain IRAs, because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 96% of the Machesna IRA would be BCNM or EW and 90% of the Garcia Mountain IRA would be BCNM or EW. Under Alternative 3, 99% of the Machesna IRA would be in EW or RW and 96% of the Garcia Mountain IRA would be RW or EW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.17 – *Calochortus plummerae* (Plummer's Mariposa Lily)**

*Calochortus plummerae* is currently on the Regional Forester's Sensitive species list; however, it has been proposed for removal by the southern California National Forests.

*Species Information:* *Calochortus plummerae* occurs in the Santa Monica, San Gabriel, San Bernardino, San Jacinto, and Santa Ana Mountains, and on alluvial fans at the base of these ranges. Many of the known occurrences are on private land. Major populations occur adjacent to NFS land on alluvial fans at Day Canyon, Etiwanda, and Summit Valley. *Calochortus plummerae* is a monocotyledon in the lily family (Liliaceae). *Calochortus plummerae* is a perennial bulbiferous herb that blooms May–July.

*Calochortus plummerae* is found at elevations of 325–5,580 feet (100–1,700 meters) on rocky, granitic soils, or on gravelly alluvium, generally in chaparral or coastal sage scrub habitats and less often in grasslands, alluvial fan sage scrub, oak woodland, and Ponderosa pine woodland.

*Occurrences in IRAs:* There are 0.31 acres of mapped occurrences for this species in the Raywood Flat-B IRA (SBNF). All of the mapped occurrences are in BCNM. This species is also known from the Westfork and West Fork IRAs on the ANF. Those occurrences have not been mapped so no acreage data are available for them.

*Potential Effects:* Under Alternative 1 and 2, all of the 0.31 acres of mapped occurrences on the SBNF would remain in BCNM. The potential effects from recreation and motorized vehicle use are relatively low under BCNM conditions. Under Alternative 3, those occurrences would be in RW. The potential for effects due to recreational use may be further reduced under Alternative 3 (any trails that are present near the occurrences would become closed to mountain biking).

Because the ANF occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ for those occurrences. West Fork: Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 94% of the West Fork IRA would be BCNM or EW and, 96% of the Westfork IRA would be BCNM. Under Alternative 3, 94% of the West Fork IRA would be RW and 95% of the Westfork IRA would be RW or BCNM (less than 1%).

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects: Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.18 – *Calochortus simulans* (San Luis Obispo Mariposa Lily)**

*Species Information:* *Calochortus simulans* is endemic to San Luis Obispo and Santa Barbara counties from the southern Santa Lucia Mountains near Lake Nacimiento to Aliso Creek in the front country of Sierra Madre ridge. *Calochortus simulans* is a monocot in the lily family (Liliaceae, section *Mariposa*).

*Calochortus simulans* is bulb-bearing perennial herb. *Calochortus simulans* appears to have an 'endurer' life history strategy for coping with wildfire. When wildfire occurs, the current year's crop of stems, flowers, fruits, and seeds are generally consumed by fire resulting in a loss of one year's reproductive output. However, the affected plants typically live, the plant's bulbs being sufficiently deep in the soil to survive most fire events. In response to post fire environmental cues, most populations of *Calochortus* respond the year after a wildfire event with higher than usual percentages of plants producing flowering stems. This results in increased reproductive output and the dispersal of seeds into an environment that, for a short period of time, will produce less competition from neighboring plants.

*Calochortus simulans* is found in chaparral, cismontane woodlands, lower montane coniferous forest, and valley and foothill grassland on sandy, often granitic but sometimes serpentinite substrates, at elevations of about 1,300–3,600 feet (395–1,100 meters).

*Occurrences in IRAs:* While this species is known from the Garcia Mountain, Machesna Mountain, and Spoor Canyon IRAs (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 85% of the Spoor Canyon IRA would be BCNM, 90% of the Garcia Mountain IRA would be BCNM or EW, and 96% of the Marchesna Mountain IRA would be BCNM or EW. Under Alternative 3, 96% of the Garcia Mountain IRA would be RW or EW, 99+% of the Spoor Canyon IRA would be RW, and 99% of the Marchesna Mountain IRA would be in EW or RW.

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial for this species.

### **III-2.19 – *Calochortus weedii* var. *intermedius* (Intermediate Mariposa Lily; Weed’s Intermediate Mariposa Lily)**

*Species Information:* *Calochortus weedii* var. *intermedius* occurs in the San Jose Hills, Puente Hills, and Santa Ana Mountains of Orange, Riverside, and Los Angeles counties. There is only one record for *Calochortus weedii* var. *intermedius* on the NFS land, located at Sierra Peak on the Trabuco Ranger District of the CNF. The record is an old 1940 collection and has not been verified since.

*Calochortus weedii* var. *intermedius* is an herbaceous perennial in the lily family (Liliaceae) that overwinters as a bulb, having a fibrous coat. Plants flower from May to through June. *Calochortus weedii* var. *intermedius* grows on dry, open rocky slopes in chaparral and coastal scrub at elevations of 390–2,800 feet (120–850 meters). It commonly occurs in open coastal sage vegetation along ridgelines, and on calcareous soils.

*Occurrences in IRAs:* There are 4.37 acres of mapped occurrences for this species in the Ladd and Coldwater IRAs (CNF). The Coldwater IRA has 2.43 acres of mapped occurrences with 2.39 acres BC and 0.04 BCNM. The Ladd IRA has 1.94 acres with 0.15 acres BC, 1.64 acres BCMUR, and 0.15 acres BCNM.

*Potential Effects:* Under Alternative 1, there are 2.54 acres of BC, 0.19 acres of BCNM, and 1.64 acres of BCMUR. Under Alternative 2, the acres of BCMUR would remain the same; there would be a decrease in BC acres to 2.39; and an increase of BCNM to 0.35. Alternative 3 would be the same as Alternative 2 except that the 0.4 acres of BCNM would go to RW. Alternatives 2 and 3 may have a slightly reduced risk of effects from recreation and motorized use.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.20 – *Calochortus weedii* var. *vestus* (Late-Flowered Mariposa Lily)**

*Species Information:* *Calochortus weedii* var. *vestus* occurs at several dozen scattered locations in the Santa Lucia Ranges and the Santa Ynez Mountains of Monterey, San Luis Obispo, Santa Barbara, and Ventura Counties. *Calochortus weedii* var. *vestus* occurs on the LPNF in the Lion Den Botanical Area and at about nine other nearby locations in the Santa Lucia Mountains and Fort Hunter Liggett; in the Santa Ynez Mountains at about nine locations; and in the mountains to the west from Ortega Trail near Wheeler Springs, to Howard and Gridley Trails on the either side of Nordhoff Ridge, to Santa Paula Canyon Trail and Santa Paula Peak.

*Calochortus weedii* var. *vestus* is a monocot in the lily family (Liliaceae). *Calochortus weedii* var. *vestus* is a bulb-bearing perennial herb that flowers June-August. *Calochortus weedii* var. *vestus* grows in chaparral, and open, dry sites in cismontane and riparian woodland at elevations of 880–6,250 feet (270–1,910 meters), often on serpentinite substrates. It is also been found on sandstone, siltstone, and shale substrates. Some occurrences of *Calochortus weedii* var. *vestus* are on rocky sites, disturbed areas, road banks, and fuel breaks, suggesting either a tolerance of disturbance, or a lack of tolerance of competition from other plants. The key habitat element for late-flowered mariposa lily may be open, rocky substrates with reduced competition from other vegetation.

*Occurrences in IRAs:* There are 0.08 acres of mapped occurrences of this species in the Dry Lakes IRA (LPNF) in DAI. This species is also known from the Sespe-Frazier, Tequepis, and White Ledge IRAs (LPNF), but occurrences have not been mapped and no acreages are available.

*Potential Effects:* For the Dry Lakes IRA occurrence, there are no changes in zoning of any of the mapped occurrences proposed for any of the alternatives. The effects would remain the same under all three alternatives.

Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 98% of the White Ledge IRA would be BCNM, 74% of the Tequepis IRA would be BCNM, and 94% of the Sespe-Frazier IRA would be BCNM, CB, RW, or EW. Under Alternative 3, 99% of the White Ledge IRA would be RW, 87% of the Tequepis IRA would be in RW, and 95% of the Sespe-Frazier IRA would be in those same categories (with 41% in RW).

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial for this species.

### **III-2.21 – *Calycadenia villosa* (Dwarf Western Rosinweed)**

*Species Information:* *Calycadenia villosa* is known from a number of occurrences in the central and southern outer South Coast Ranges. There are four occurrences of *Calycadenia villosa* on the LPNF. Occurrences are located on the slopes of Black Mountain, on the Camatta-Navajo Divide, on the ridge between the Camatta and Navajo creeks, and near Nacimiento Summit within the Santa Lucia Mountains.

*Calycadenia villosa* is a dicotyledonous plant in the sunflower family (Asteraceae). *Calycadenia villosa* is an annual that blooms from May to October. *Calycadenia villosa* inhabits chaparral, cismontane woodland, meadow and seeps, and valley and foothill grasslands, growing in both rocky and fine soils at 240-1350 meter elevations.

*Occurrences in IRAs:* While this species is known from the Black Mountain IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Black Mountain IRA would be BCNM. Under Alternative 3, 95% of the Black Mountain IRA would be in RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial for this species.

### **III-2.22 – *Castilleja gleasonii* (Mount Gleason's Indian Paintbrush)**

*Species Information:* *Castilleja gleasonii* is endemic to the western San Gabriel Mountains. Fewer than ten occurrences of *Castilleja gleasonii* are known, all located on the ANF. The primary distribution is at Messenger Peak/Flat, Mount Gleason, Lightning Point Campground, and east to Chilao, Horse Flats, and the Little Rock Creek area of the San Gabriel Mountains. In the Liebre Mountains, a population was recently identified to be present at Knapp Ranch, a recently acquired parcel of land, and several more occurrences were found to the west of Knapp Ranch, in upper Cienaga Canyon, and at the west end of Liebre Mountain at the saddle between Liebre Gulch and Salt Creek.

*Castilleja gleasonii* is a dicot in the broomrape family (Orobanchaceae). Its taxonomic position within the genus has not yet been fully resolved. *Castilleja gleasonii* is usually found in areas of open yellow pine woodland (e.g., ponderosa pine, Jeffrey pine, and Coulter pine [*Pinus ponderosa*, *P. jeffreyi*, *P. coulteri*]) with a well-developed shrub or subshrub understory.

Like all *Castilleja* species, *Castilleja gleasonii* is hemiparasitic on other plants. Associations are formed with big sagebrush (*Artemisia tridentata* ssp. *tridentata*), wild buckwheats (*Eriogonum* spp.), and other native species. The elevation range of the species is from 5,000 to 7,100 feet.



*Occurrences in IRAs:* This species is known from the Fish Canyon IRA (ANF). These occurrences are not mapped; thus, it is not possible to display acreages by LUZ.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 98% of the Fish Canyon IRA would be BCNM or RW. Under Alternative 3, 99% of the IRA would be in BCNM or RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial for this species.

### **III-2.23 – *Castilleja lasiorhyncha* (San Bernardino Mountains Owl's Clover)**

*Species Information:* *Castilleja lasiorhyncha* occurs in San Bernardino, Riverside, and San Diego counties. The majority of the known occurrences are found in the San Bernardino Mountains, near Lake Arrowhead, Kinley Creek, Miller Canyon, Rock Camp, Maloney Canyon, Big Bear Lake, Fawnskin, Sugarloaf, Holcomb Valley, Running Springs, Snow Valley, and Hanna Flat. The single occurrence in Riverside County is within Mount San Jacinto State Park, and the record from San Diego County occurs in Cuyamaca Rancho State Park.

*Castilleja lasiorhyncha* is an annual dicotyledonous herb in the broomrape family (Orobanchaceae) that blooms from June to July. *Castilleja lasiorhyncha* occurs along vernal moist streams, drainages, springs, and swales and on meadow margins in chaparral and montane conifer forests. The taxon typically occurs in open areas in mesic to drying fine-grained soils of clay or granitic origin. *Castilleja lasiorhyncha* is found between 1,135-2,390 m. Plant abundance is strongly correlated with annual rainfall, and known occurrences may be less vigorous or absent in a below-average rainfall year.

*Occurrences in IRAs:* While this species is known from the Raywood Flat-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Raywood Flat-B IRA would be BCNM, RW, or EW. Under Alternative 3, 92% of the IRA would be in those same categories (with 91% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.24 – *Caulanthus simulans* (Payson's Jewel-Flower; Payson's Wild Cabbage)**

*Species Information:* *Caulanthus simulans* occurs in Riverside and San Diego counties.

*Caulanthus simulans* occurs on the CNF and the SBNF. Within the CNF, *Caulanthus simulans* occurs along High Point truck trail, in an open area beside Thing Valley Road, and along Barker Valley Trail southwest of Palomar Divide Road. Within the SBNF, *Caulanthus simulans* occurs within the San Jacinto Mountains along the road to the dump in Pinyon Flats and along Bonita Vista Drive west of Cedar Crest.

*Caulanthus simulans* is an erect annual plant that flowers from April to May. *Caulanthus simulans* grows in sandy, granitic soil within chaparral and coastal sage scrub, often on the desert side of the mountains. It also is found in streambeds and on steep, rocky slopes.

*Occurrences in IRAs:* There are 5.99 acres of mapped occurrences of this species in the Barker Valley IRA (CNF); 2.12 BC and 3.87 BCNM.

*Potential Effects:* Under Alternative 1, the 2.12 acres of BC and 3.87 acres of BCNM would remain unchanged. Under Alternatives 2 and 3, the 3.87 acres of BCNM would change to RW. Occurrences in BCNM likely already have very low effects from recreation uses since more activities/effects occur close to roads. Alternatives 2 and 3 may have a slightly reduced risk of effects from recreation use for any occurrences that occur close to trails.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.25 – *Chorizanthe blakleyi* (Blakley's Spineflower)**

*Species Information:* *Chorizanthe blakleyi* is endemic to the north slope of the Sierra Madre Mountains in Santa Barbara County. *Chorizanthe blakleyi* is found on the LPNF at the following locations: White Oaks Guard Station; Aliso Canyon; above Montgomery Potrero; and near McPherson Peak. The population that is one mile southeast of McPherson Peak is the type locality. *Chorizanthe blakleyi* is a dicot in the buckwheat family (Polygonaceae) and it flowers from April to June. *Chorizanthe blakleyi* occurs on flats and north-facing slopes in sandy, sometimes rocky, open areas in chaparral or pinyon-juniper woodland.

*Occurrences in IRAs:* While this species is known from the Fox Mountain and Spoor Canyon IRAs (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 85% of the Spoor Canyon IRA would be BCNM and 98% of the Fox Mountain IRA would be BCNM. Under Alternative 3, 99+% of the Fox Mountain and Spoor Canyon IRAs would be RW. Without knowing exact locations of the occurrences relative to the current and proposed

LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 1, 2, or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.26– *Chorizanthe parryi* var. *parryi* (Parry’s Spineflower; San Bernardino Spineflower)**

*Species Information:* *Chorizanthe parryi* var. *parryi* occurs on alluvial fans and terraces in San Bernardino, Riverside, Los Angeles, and Orange counties. Occurrence locations include the Santa Ana River Wash, Mill Creek, San Gorgonio Pass, Arroyo Seco in the San Gabriel Mountains, Devil Canyon, Cajon Wash, Millard Canyon, Wildwood Canyon, and the vicinities of Colton, Winchester, and Murrieta. *Chorizanthe parryi* var. *parryi* is a dicotyledonous annual herb in the buckwheat family (*Polygonaceae*).

*Chorizanthe parryi* var. *parryi* occurs in valley-floor and foothill habitats between 100 and 3,700 feet in elevation, and occasionally up to 5,600 feet. The plant is found in dry, sandy or gravelly soils in washes, alluvial benches, and in foothill microhabitats with unconsolidated soils and low vegetation cover. *Chorizanthe parryi* var. *parryi* most commonly occurs in openings in coastal sage scrub, chaparral, alluvial fan scrub, and the ecotone between chaparral and oak woodland.

*Occurrences in IRAs:* There are 0.12 acres of mapped occurrences in the Coldwater IRA (CNF). The mapped occurrences are in BC.

*Potential Effects:* There would be no changes to the BC zoning of 0.12 acres of occurrences under any of the alternatives. If effects are occurring under the BC zoning, the potential for them to continue would be the same under any of the alternatives.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.27 – *Chorizanthe polygonoides* var. *longispina* (Long-Spined Spineflower; Knotted Spineflower)**

While *Chorizanthe polygonoides* var. *longispina* is currently on the Regional Forester’s Sensitive species list, the four southern California National Forests proposed removing it from the Sensitive species list in 2012.

*Species Information:* *Chorizanthe polygonoides* var. *longispina*, long-spined spineflower, occurs in the Peninsular Ranges of Riverside and San Diego Counties and in Baja California. Disjunct populations in the Santa Ynez Mountains of Santa Barbara County have been reported but need verification.

*Chorizanthe polygonoides* var. *longispina* is known from the CNF and the SBNF. Within the CNF, the majority of the occurrences are located in the San Mateo Canyon Wilderness Area, but

some are in the Agua Tibia Wilderness Area, and two occurrences are near Barber Mountain in southern Descanso Ranger District. Several occurrences are present within an active grazing allotment on the SBNF.

*Chorizanthe polygonoides* var. *longispina* is small, prostrate, annual herb that blooms from April to July. *Chorizanthe polygonoides* var. *longispina* is associated with heavy, often rocky, clay soils of gabbro-derivation in open areas of needlegrass grasslands, coastal scrub and chaparral habitats, but it has also been found at the edges of vernal pools in grasslands and meadows. It is also associated with mountain meadows in sandy loam soil. It occurs at elevations of 100–4,760 feet (30–1,450 meters).

*Occurrences in IRAs:* There are 0.04 acres of mapped occurrences in the Barker Valley IRA (CNF), all in BCNM

*Potential Effects:* Under Alternative 1, the BCNM designation for the 0.04 acres of mapped occurrences would not change. Under Alternatives 2 and 3, it would change to RW. Occurrences in BCNM likely already have very low effects from recreation uses since more activities/effects occur close to roads. Alternatives 2 and 3 may have a slightly reduced risk of effects from recreation use for any occurrences that occur close to trails.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.28 – *Chorizanthe rectispina* (Straight Awned Spineflower)**

*Species Information:* *Chorizanthe rectispina* is endemic to the Santa Lucia Ranges in southern Monterey, Santa Barbara, and San Luis Obispo Counties. *Chorizanthe rectispina* occurs on Black Mountain in the La Panza Range on the LPNF. *Chorizanthe rectispina* is a dicot in the buckwheat family (Polygonaceae). *Chorizanthe rectispina* is a small annual herb that flowers May–July. *Chorizanthe rectispina* grows in chaparral, cismontane woodland, and coastal scrub at elevations of 650–3,400 feet (200–1,035 meters). It is most often found in openings in chaparral growing on gravelly soils derived from granitic rock and sometimes diatomaceous shale.

*Occurrences in IRAs:* While this species is known from the Black Mountain IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Black Mountain IRA would be BCNM. Under Alternative 3, 95% of the IRA would be in RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that

either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.29 – *Chorizanthe xanti* var. *leucotheca* (White-Bracted Spineflower; Riverside Spineflower)**

*Species Information:* This species has been proposed for addition to the Regional Forester's Sensitive species list. It may be considered Sensitive before the Record of Decision has been signed for this project; thus, it is being treated as Sensitive so that it would not be necessary to conduct another analysis later.

*Chorizanthe xanti* var. *leucotheca* is endemic to the washes and outwash plains on the desert bases of the San Bernardino, San Jacinto and Santa Rosa Mountains. *Chorizanthe xanti* var. *leucotheca* is known from one occurrence on the SBNF (Pinyon Flats/upper near the Santa Rosa Wilderness). The rest of the occurrences are in downstream alluvial habitats widely scattered in the eastern San Gabriel, San Bernardino, San Jacinto, and Santa Rosa Mountains; however, site-specific information is sparse. *Chorizanthe xanti* var. *leucotheca* has been observed at Whitewater Canyon, Millard Canyon, and Pinyon Flats.

*Chorizanthe xanti* var. *leucotheca* is a dicotyledon in the buckwheat family (Polygonaceae). This annual herb blooms between April–June. *Chorizanthe xanti* var. *leucotheca* is found in sandy to gravelly places in desert scrub communities, including Mojavean Desert scrub and pinyon-juniper woodlands, at elevations of 980-3,900 feet (300-1,200 m). It generally occurs on alluvial washes, terraces, and plains within these habitats. Mojavean Desert scrub and pinyon-juniper woodland are widespread within the S. California Province; however, the microhabitat required by *Chorizanthe xanti* var. *leucotheca* is much more narrowly restricted.

*Occurrences in IRAs:* There are 0.24 acres of mapped occurrences of this species in the Cactus Springs-B IRA (SBNF), all in BC.

*Potential Effects:* The 0.24 acres of this species in BC would remain the same under Alternative 1. It would be changed to BCNM under Alternative 2; and RW under Alternative 3. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads. They may be further reduced under Alternative 3 by the removal of mountain biking on trails.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.30 – *Clarkia delicata* (Delicate Clarkia; Campo Clarkia)**

While *Clarkia delicata* is currently on the Regional Forester's Sensitive species list, the CNF proposed removing it from the Sensitive species list in 2012.

*Species Information:* *Clarkia delicata* occurs in the southern Peninsular Ranges of San Diego County and in northern Baja California, Mexico. *Clarkia delicata* is a small annual erect herb that flowers from May to June. This species occurs in oak woodlands and chaparral communities at elevations of 760–3,250 feet (235–1,000 meters). It appears to be associated with gabbro soils, although it is also found on other soil types derived from marine terrace deposits and granite.

*Occurrences in IRAs:* There are 2.79 acres of mapped occurrences in the Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, and Upper San Diego River IRAs (CNF). There are 0.32 acres of BC in the Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New IRAs and 2.4 acres of BCNM in the Upper San Diego River IRA.

*Potential Effects:* Under Alternative 1, the 0.32 acres of BC and 2.47 acres of BCNM would remain the same. Under Alternatives 2 and 3, all 2.79 acres would become RW. If effects are occurring under the BC zoning, they may be reduced on 0.32 acres under Alternatives 2 and 3 where all 2.47 acres would be in RW.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species.

### **III-2.31 – *Delphinium hesperium* ssp. *cuyamaceae* (Cuyamaca Larkspur)**

*Species Information:* *Delphinium hesperium* ssp. *cuyamaceae*, Cuyamaca larkspur, is endemic to the Peninsular Ranges. There are two occurrences of *Delphinium hesperium* ssp. *cuyamaceae* on the CNF in the Laguna Mountain Recreation Area. *Delphinium hesperium* ssp. *cuyamaceae* is a perennial herb that over winters as a rootstock. It flowers from May to July. On NFS lands, *Delphinium hesperium* ssp. *cuyamaceae* grows along dry edges of montane meadows and vernal pools. In addition to meadow habitat, this perennial species grows in open shrub lands and appears to be associated with gabbro-derived soils. Other suitable habitat for the *Delphinium hesperium* ssp. *cuyamaceae* is sandy soils, saturated during winter months combined with gentle slopes and lack of woody vegetation.

*Occurrences in IRAs:* While this species is known from the Sill Hill IRA (CNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 96% of the Sill Hill IRA would be BCNM, CB, or RW (with 85% in RW). Under Alternative 3, 96% of the Sill Hill IRA would be RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult to fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.32– *Delphinium umbraculorum* (Umbrella Larkspur)**

*Species Information:* *Delphinium umbraculorum* is endemic to the Outer South Coast Ranges from Monterey County down through San Luis Obispo and Santa Barbara counties to Ventura County and the western Transverse Range. *Delphinium umbraculorum* is found on the LPNF in the eastern Santa Lucia Mountains, the San Rafael Mountains, Sierra Madre Ridge, and the Santa Ynez Mountains. *Delphinium umbraculorum* is also reported from Murrieta Canyon near Ojai and Schiedecks in the upper Cuyama River watershed. In San Luis Obispo County, *Delphinium umbraculorum* is reported from the west-facing slope of Lopez Canyon and the headwaters of the Arroyo Grande watershed, areas that may be on the LPNF.

*Delphinium umbraculorum* is a dicot in the buttercup family (Ranunculaceae). *Delphinium umbraculorum* is a perennial herb that blooms from April to June. *Delphinium umbraculorum* is found in shaded or sunny slopes within cismontane woodland plant communities at an elevation of 340 to 600 meters. In San Luis Obispo County, *Delphinium umbraculorum* is frequently found on loose soil derived from disintegrating shale.

*Occurrences in IRAs:* While this species is known from the Fox Mountain, Diablo, Garcia Mountain, Machesna Mountain, Sespe-Frazier, Spoor Canyon, Tequepis, and White Ledge IRAs (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 98% of the Diablo IRA would be BCNM, 98% of the Fox Mountain IRA would be BCNM, 90% of the Garcia Mountain IRA would be BCNM or EW, 96% of the Machesna Mountain IRA would be BCNM or EW, 94% of the Sespe-Frazier IRA would be BCNM, CB, RW, or EW, 85% of the Spoor Canyon IRA would be BCNM, 98% of the White Ledge IRA would be BCNM, and 74% of the Tequepis IRA would be BCNM.

Under Alternative 3, 87% of the IRA would be in RW, 99% of the White Ledge IRA would be RW, 99+% of the Spoor Canyon IRA would be RW, 95% of the Sespe-Frazier IRA would be in those same categories (with 41% in RW), 99% of the Machesna Mountain IRA would be in EW or RW, 96% of the Garcia Mountain IRA would be RW or EW, 99+% of the Fox Mountain IRA would be RW, and 99+% of the Diablo IRA would be RW.

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.33 – *Dieteria canescens* var. *ziegleri* (Ziegler's Aster)**

*Species Information:* *Dieteria canescens* var. *ziegleri* is endemic to the Santa Rosa Mountains of Riverside County in southern California. Two occurrences of *Dieteria canescens* var. *ziegleri* are known in the SBNF in the area of Santa Rosa Mountain. A portion of these occurrences may occur on private lands. Both occurrences are along roads and in somewhat disturbed clearings.

*Dieteria canescens* var. *ziegleri* is a dicotyledonous plant in the sunflower family (Asteraceae). Five varieties of *D. canescens* are recognized; the other four are common and occur in a variety of habitats throughout California. Of the five varieties, only var. *ziegleri* is a long-lived perennial or subshrub; it is further distinguished by its larger flower heads.

*Dieteria canescens* var. *ziegleri* grows in the understory of small montane coniferous forest stands at elevations of 4,500–8,200 feet (1,400–2,470 meters) on dry ridges, along roadsides, and in slightly disturbed clearings. Both occurrences are located near roads and campsites. *Dieteria canescens* var. *ziegleri* may have some tolerance to ground disturbance.

*Occurrences in IRAs:* There are 0.53 acres of mapped occurrences on the SBNF; 0.15 acres of BC in the Cactus Springs-B IRA and 0.38 acres of BC in the Cactus Springs B-New IRA.

*Potential Effects:* Under Alternative 1, the 0.53 acres of occurrences in BC would remain the same. The 0.38 acres of BC in Cactus Springs-B New IRA would change to BCNM under Alternative 2 and RW under Alternative 3. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads. These effects would be further reduced under Alternative 3 for the 2.47 acres that would be in RW if effects were occurring from mountain bike use on trails.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.34 – *Draba corrugata* var. *saxosa* (Rock Draba)**

*Species Information:* *Draba corrugata* var. *saxosa* is known only from the San Jacinto and Santa Rosa Mountains in Riverside County. *Draba corrugata* var. *saxosa* is known on the on the SBNF at Toro and Tahquitz Peaks. *Draba corrugata* is characterized as a biennial to perennial herb.

*Draba corrugata* var. *saxosa* occurs at elevations of 8,000–11,500 feet and inhabits alpine boulder and rock fields, subalpine coniferous forests, and upper montane coniferous forests in rocky areas. Alpine plants are vulnerable to trampling by hikers and other forms of ground disturbance but these impacts are limited to a small number of locations around developed recreation areas, roads, and trails. Trampling and other ground disturbances resulting from hiking, rock climbing, camping, and road building have removed or degraded some areas of



alpine and subalpine plants. In general, however, alpine and subalpine ecosystems are considered to be largely intact, stable, and little disturbed with the exception of some heavy recreation use in the immediate vicinity of trails.

*Occurrences in IRAs:* There are 0.18 acres of mapped occurrences of this species in the Cactus Springs-B IRA on the SBNF, all in BC.

*Potential Effects:* Under Alternative 1, the 0.18 acres of occurrences in BC would remain the same. The 0.18 acres of BC would change to BCNM under Alternative 2 and RW under Alternative 3. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads. These effects may be further reduced under Alternative 3 if effects were occurring from mountain bike use on trails.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.35 – *Dudleya viscida* (Sticky Dudleya)**

*Species Information:* *Dudleya viscida*, sticky dudleya, is distributed in the coastal foothills and mountains of Orange, Riverside, and San Diego counties. *Dudleya viscida* occurs on the CNF in the Santa Ana and Santa Margarita Mountains. *Dudleya viscida* is a perennial succulent herb in the stonecrop family (Crassulaceae) that flowers from May to June. *Dudleya viscida* occurs on rock outcrops, cliffs, and bluffs along stream courses and also along road cuts in coastal bluffs in southern mixed chaparral, coast live oak woodland and sycamore woodland. In San Diego County, it has been associated with exposed gabbroic or in very shallow soils and cracks on vertical rock faces.

*Occurrences in IRAs:* There are 5.25 acres of mapped occurrences of this species; all in the Trabuco IRA (CNF) in DAI.

*Potential Effects:* Under Alternative 1, the 5.25 acres of occurrences in DAI would remain the same. The 5.25 acres of DAI would change to BCNM under Alternative 2 and RW under Alternative 3. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads. These effects may be further reduced under Alternative 3 if effects were occurring from mountain bike use on trails.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial over the long-term.

### **III-2.36 – *Eriastrum luteum* (Yellow Flowered Eriastrum)**

*Species Information:* *Eriastrum luteum* is endemic to Monterey and San Luis Obispo counties. *Eriastrum luteum* is rare in the Santa Lucia Mountains west of Paso Robles and locally common east of Santa Margarita from near Salinas River to the west base of the La Panza Range.

*Eriastrum luteum* is a dicot in the phlox family (Polemoniaceae) that flowers in May and June. *Eriastrum luteum* is found away from the immediate coast in broadleaved upland forest, chaparral, and cismontane woodland on dry, sandy or gravelly substrates at an elevation of 950 to 3,280 feet (290 to 1,000 meters).

*Occurrences in IRAs:* While this species is known from the Black Mountain IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Black Mountain IRA would be BCNM. Under Alternative 3, 95% of the IRA would be in RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.37 – *Eriophyllum lanatum* var. *hallii* (Fort Teton Woolly Sunflower)**

*Species Information:* *Eriophyllum lanatum* var. *hallii* is known from two locations on the eastern edge of the San Emigdio Mountains near Fort Tejon, Kern County and from two locations in the Sierra Madre Mountains of Santa Barbara County. The two occurrences located in the Sierra Madre Mountains are on NFS land on the Mount Pinos Ranger District of the LPNF. The only other known locations are on private land in Johnson Canyon near Fort Tejon, Kern County.

This member of the sunflower family is an erect perennial (subshrub) that usually blooms from June to July. Fort Tejon woolly sunflower grows on rocky soils in chaparral and foothill woodland at elevations between 3,900-4,900 feet (1,200-1,500 m).

*Occurrences in IRAs:* While this species is known from the Fox Mountain IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 98% of the Fox Mountain IRA would be BCNM. Under Alternative 3, 99+% of the Fox Mountain IRA would be RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.38 – *Fritillaria ojaiensis* (Ojai Fritillary)**

*Species Information:* *Fritillaria ojaiensis* is found on Cuesta Ridge in San Luis Obispo County, and from the San Rafael and Santa Ynez Mountains of Santa Barbara to Nordhoff Ridge and the Topatopa Mountains of Ventura County, where it is known from about 10–15 occurrences. In addition, this plant has been reported from the South Coast Ridge area (the plants there having been previously identified as *Fritillaria viridea*).

*Fritillaria ojaiensis* is a monocot in the lily family (Liliaceae). *Fritillaria ojaiensis* is a perennial bulbiferous herb that blooms February through May. *Fritillaria ojaiensis* grows on moist slopes in chaparral, in mesic broad-leaved upland woodlands (often near drainages), and in lower montane conifer forests at elevations of 980-2,200 feet (300-670 meters).

*Occurrences in IRAs:* There are 0.23 acres of mapped occurrences in the Sespe-Frazier IRA (LPNF); all are in BCNM. This species is also known from the White Ledge and Tequepis IRAs but the occurrences have not been mapped so no acreages are available.

*Potential Effects:* For the Sespe-Frazier IRA mapped occurrences, under Alternatives 1 and 2, the 0.23 acres of occurrences in BCNM would remain the same. The 5.25 acres of BCNM would change to RW under Alternative 3. If effects are occurring under the BCNM zoning, they may be reduced under Alternative 3 by the removal of mountain bike use on trails.

For the White Ledge and Tequepis IRA occurrences that have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 98% of the White Ledge IRA would be BCNM and 74% of the Tequepis IRA would be BCNM. Under Alternative 3, 87% of the IRA would be in RW and 99% of the White Ledge IRA would be RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.39 – *Galium angustifolium* ssp. *jacinticum* (San Jacinto Mountains Bedstraw)**

*Species Information:* *Galium angustifolium* ssp. *jacinticum* is endemic to the San Jacinto Mountains in Riverside County. It is known from approximately ten occurrences within the Lake Fulmor, Black Mountain, Alandale Pines, Hall Canyon, Dark Canyon, and Idyllwild areas. At least six occurrences are present on the SBNF near Black Mountain, Lake Fulmor, Alandale Ranger Station, Dark Canyon, Hall Canyon and north of Alvin Meadows. *Galium angustifolium* ssp. *jacinticum* is a dicotyledonous plant in the bedstraw family (Rubiaceae). *Galium*

*angustifolium* ssp. *jacinticum* is a perennial herb that flowers June–August. *Galium angustifolium* ssp. *jacinticum* grows in the understory of open mixed forest and lower montane coniferous forests. It occurs at elevations of approximately 5,400–6,400 feet (1,630–1,940 meters).

*Occurrences in IRAs:* There are 0.64 acres of mapped occurrences in the Cactus Springs-B IRA (SBNF), all in BC.

*Potential Effects:* Under Alternative 1, the 0.64 acres of BC would not change. Under Alternative 2, 0.52 acres of occurrences in BC would change to BCNM; under Alternative 3, they would become RW. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain bike use on trails. Effects on 0.14 acres of BC would remain the same under all three alternatives.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.40 – *Gilia leptantha* ssp. *leptantha* (San Bernardino Gilia)**

*Species Information:* *Gilia leptantha* ssp. *leptantha* is endemic to the upper Santa Ana River watershed in the San Bernardino Mountains, San Bernardino County, California. Nine occurrences are documented within the SBNF. These occurrences are known predominantly from the upper Santa Ana Watershed. *Gilia leptantha* ssp. *leptantha* is a dicotyledon in the phlox family (Polemoniaceae). This annual herb flowers between June–August. *Gilia leptantha* ssp. *leptantha* occurs at elevations of 5,000–8,200 feet (1,524–2,499 meters) and inhabits gravelly, rocky or sandy areas and streambanks within montane coniferous forest.

*Occurrences in IRAs:* While this species is known from the Raywood Flat-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Raywood Flat-B IRA would be BCNM, RW, or EW. Under Alternative 3, 92% of the IRA would be in those same categories (with 91% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.41 – *Hesperocyparis stephensonii* (Cuyamaca Cypress)**

*Species Information:* This species was formerly known as *Cupressus arizonica* ssp. *a*). *Hesperocyparis stephensonii*, Cuyamaca cypress, is endemic to the Cuyamaca Mountains of San Diego County and is the most narrowly distributed cypress in California. It occurs in several groves in the Cuyamaca Peak/King Creek areas. *Hesperocyparis stephensonii* groves represent a single population that occurs naturally over an estimated 230 acres (93 hectares), both on the CNF and in Cuyamaca Rancho State Park. In 1991, the CNF established the King Creek Research Natural Area to protect this species and its habitat. A population on the CNF in the Agua Tibia Wilderness near Palomar Mountain, apparently planted by homesteaders, was destroyed in the Pechanga Fire in 2000.

*Hesperocyparis stephensonii* is a gymnosperm in the cypress family (Cupressaceae). It is a closed-coned conifer that relies on fire for reproduction. Fire is required to open the cones so that seeds are shed. Fire is also important because it enhances seed germination. Cones may open as a result of old age or other causes, but seeds rarely become established in the absence of fire. The seeds germinate during the winter following a fire event.

*Hesperocyparis stephensonii* usually grows in gabbro-derived clay soils on steep slopes along drainages. It can be dominant in the canopy or co-dominant with Coulter pine (*Pinus coulteri*) and coast live oak (*Quercus agrifolia*). The species occurs at elevations of 3,400-5,600 feet (1,030-1,705 meters). Groves are typically surrounded by chaparral vegetation composed of chamise, manzanita, and scrub oak.

*Occurrences in IRAs:* There are 214.65 acres of mapped occurrences in the Sill Hill IRA (CNF), with 26.56 acres BCNM, 167.48 acres CB, and 20.61 acres DAI in Sill Hill. The King Creek CB zone is also within the King Creek Research Natural Area.

*Potential Effects:* Under Alternatives 1 and 2, the zoning (167.48 CB, 26.56 BCNM, and 20.61 DAI) would not change. Under Alternative 3, all occurrences (194.04 acres) would be in RW except for 20.61 acres in DAI. If effects are occurring under the BCNM zoning, they may be reduced under Alternative 3 for occurrences in RW if effects were occurring from motorized and non-motorized vehicle use. Effects on 20.61 acres of DAI would remain the same under all three alternatives.

Normally, a change from CB to RW would result in camping being a suitable use where it was not previously permitted under CB zoning. However, most of the occurrences of this species occur within an area that would continue to be managed within the King Creek RNA (in the RW) where camping is not permitted. The use of the area for research and monitoring of natural forest processes would continue. Continuing to manage the area as RNA may benefit the Cuyamaca cypress.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.42 – *Heuchera hirsutissima* (Shaggy-Haired Alumroot)**

*Species Information:* *Heuchera hirsutissima* is endemic to the northern Peninsular Ranges in Riverside County. Populations have been reported from Toro Peak in the Santa Rosa Mountains and from San Jacinto Peak, Tahquitz Peak, and along a branch of Snow Creek in the San Jacinto Mountains. *Heuchera hirsutissima* occurs in the Mt. San Jacinto Wilderness Area on the SBNF and in Mount San Jacinto State Park.

*Heuchera hirsutissima* is a dicotyledonous plant in the saxifrage family (Saxifragaceae). *Heuchera hirsutissima* is a perennial rhizomatous herb that blooms May-July. *Heuchera hirsutissima* grows among rocks and in crevices of granite boulders at elevations of 3,500–10,800 feet (1,815-3,500 meters) in upper montane conifer and subalpine forest habitats in the San Jacinto and Santa Rosa Mountains.

*Occurrences in IRAs:* There are 2.04 acres of mapped occurrences of this species, all in BC: 0.72 acres in the Cactus Springs-B and 1.32 acres in the Cactus Springs-B New IRAs (SBNF).

*Potential Effects:* Under Alternative 1, the zoning (2.04 acres BC) would not change. Under Alternative 2, 1.86 acres of BC would be changed to BCNM; those acres would go to RW under Alternative 3. The remaining 0.18 acres would remain BC. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking (because mountain bikes would not be permitted in RW) or activities under Special Use permits. Effects on the occurrences in 0.18 acres of BC would remain the same under all three alternatives.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.43 – *Heuchera parishii* (Parish's Alumroot)**

*Species Information:* *Heuchera parishii* is endemic to the San Bernardino Mountains in San Bernardino County. *Heuchera parishii* occurs on the SBNF, in the Big Bear area, the Upper Santa Ana River, Upper Mill Creek, and the San Gorgonio Wilderness to near the Summit.

*Heuchera parishii* is a dicotyledon in the saxifrage family (Saxifragaceae) that flowers May-June. *Heuchera parishii* occupies rocky places in lower and upper montane and subalpine coniferous forests as well as alpine boulder and rock fields at elevations of 6,000-11,500 feet (1,500–3,800 meters). Rocky slopes and outcroppings in the montane through alpine zones are narrowly distributed, but fairly well protected within the planning area. Many of these areas are situated in established Wilderness areas.

*Occurrences in IRAs:* While this species is known from the Raywood Flat-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Raywood Flat-B IRA would be BCNM, RW, or EW. Under Alternative 3, 92% of the IRA would be in those same categories (with 91% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.44 – *Horkelia cuneata* ssp. *puberula* (Mesa Horkelia; Wedgeleaf Horkelia)**

*Species Information:* *Horkelia cuneata* ssp. *puberula* is found in the Outer South Coast Ranges and the South Coast Range, in Los Angeles, Riverside, Santa Barbara, San Luis Obispo, and Ventura Counties. It is believed to be extirpated from San Bernardino and San Diego counties.

*Horkelia cuneata* ssp. *puberula* is a dicot on the rose family (Rosaceae). It is a perennial herb that flowers from February to September. *Horkelia cuneata* ssp. *puberula* occupies sandy or gravelly areas in chaparral, cismontane woodland, and coastal scrub. The elevation range of this subspecies is 230 to 2,660 feet (70-810 meters).

*Occurrences in IRAs:* There are 6.99 acres of mapped occurrences in the Trabuco IRA (CNF), all in BCNM.

*Potential Effects:* Under Alternatives 1 and 2, the zoning (6.99 acres BCNM) would not change. Under Alternative 3, all 6.99 acres would become RW. If effects are occurring under the BCNM zoning, they may be reduced under Alternative 3 if effects were occurring from mountain biking (because mountain bikes would not be permitted in RW) or activities under Special Use Permits.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.45 – *Horkelia truncata* (Ramona Horkelia)**

*Species Information:* *Horkelia truncata*, Ramona horkelia, is endemic to the Peninsular Ranges of San Diego County and Baja California, Mexico. Within NFS lands, *Horkelia truncata* occurs on the CNF on all three Districts (Palomar, Trabuco, and Descanso). Plants occur in large numbers at Black Mountain, Lawson Peak, and Margarita Peak. *Horkelia truncata* is a tufted, herbaceous perennial in the rose family (Rosaceae). *Horkelia truncata* occurs on clay soils derived from gabbro along vernal streams and disturbed areas in mixed chaparral and cismontane woodlands at elevations of 1,300–4,225 feet (400–1,300 meters).

*Occurrences in IRAs:* While this species is known from the No Name IRA (CNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternatives 2 or 3, 86% of the Ladd IRA would be BCNM and 12% in BCMUR. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.46 – *Imperata brevifolia* (California Satintail)**

*Species Information:* *Imperata brevifolia* occurs at widely scattered locations throughout the Southwestern United States. In California, the plant has historically been found in the San Joaquin Valley, the Mojave Desert around Death Valley, and in widely scattered locations in the Transverse and Peninsular mountains. Other reported locations, likely horticultural introductions, include the foothills around Chico, and Lake County. Near the SBNF, this plant is known from a well-documented population at Arrowhead Hot Springs. There is also a historical collection in the area reported at the Highway 99 Whitewater Bridge, and along an irrigation ditch near Palm Springs. A historic population has been reported on the Las Padres National Forest near Lyons Spring, Matilija Canyon.

*Imperata brevifolia* is known on the ANF from the San Dimas Experimental Forest, Big Tujunga Canyon and San Gabriel Canyon. All these populations consist of a few individuals. *Imperata brevifolia* is found in and around hot springs and calcareous seeps, generally below 1500 feet (500 m). It has been reported as high as 4000 feet in the Death Valley area. The plant has also been recorded along irrigation ditches and field edges in the San Joaquin Valley and near Palm Springs. Its natural range appears to be limited to mineral seeps or springs.

*Imperata brevifolia*, a monocot, is a perennial herb in the Poaceae family.

*Occurrences in IRAs:* While this species is known from the Dry Lakes and Antimony IRAs (LPNF), Westfork (ANF), and West Fork IRAs (ANF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 88% of the Antimony IRA would be BCNM and 5% in BCMUR, 95% of the Dry Lakes IRA would be BCNM, 94% of the West Fork IRA would be BCNM or EW, and 96% of the Westfork IRA would be BCNM. Under Alternative 3, 98% of the Dry Lakes IRA would be RW, 95% of the



Westfork IRA would be RW or BCNM (less than 1%), 94% of the West Fork IRA would be RW, and 95% of the Antimony IRA would be RW.

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.47 – *Layia heterotricha* (Pale Yellow Layia)**

*Species Information:* *Layia heterotricha* has been reported from the inner South Coast Ranges, the east and western edges of the San Joaquin Valley, the Western Transverse Ranges, and Tehachapi Mountains. Within NFS lands, *Layia heterotricha* is found only within the boundaries of the LPNF. Here, *Layia heterotricha* is found on the Mount Pinos Ranger District (MPRD) and the Ojai Ranger District (ORD) in the Sierra Madre Mountains, near Pine Mountain, in the Cuyama Badlands, and in the Lockwood Valley area.

*Layia heterotricha* is a dicotyledonous plant in the sunflower family (Asteraceae) and is a member of the subtribe Madiinae (tribe Madieae). It is an annual that blooms from March to June and after seed set the plants rapidly senesce.

*Occurrences in IRAs:* While this species is known from the Fox Mountain, Antimony, Quatal, and Sespe-Frazier IRAs (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 98% of the Fox Mountain IRA would be BCNM, 88% of the Antimony IRA would be BCNM and 5% in BCMUR, 94% of the Sespe-Frazier IRA would be BCNM, CB, RW, or EW, and, 99% of the Quatal IRA would be BCNM. Under Alternative 3, 99% of the Quatal IRA would be RW, 95% of the Sespe-Frazier IRA would be in those same categories (with 41% in RW), 95% of the Antimony IRA would be RW, and 99+% of the Fox Mountain IRA would be RW.

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.48 – *Lepechinia cardiophylla* (Heart-Leaved Pitcher Sage; Santa Ana Pitcher Sage)**

*Species Information:* *Lepechinia cardiophylla*, heart-leaved pitcher sage, is found primarily in the Santa Ana Mountains of Orange and Riverside counties. It has also been reported from Iron Mountain in San Diego County and from Baja California, Mexico. There are a number of recorded occurrences of *Lepechinia cardiophylla* on the CNF. Occurrences are recorded in the Santa Ana Mountains from Sierra Peak, Bald Mountain, on the ridge between Ladd Canyon and East Fork Canyon, along Indian Truck Trail toward Santiago Peak, on Trabuco Peak, along the Divide Road, along Horse Thief Trail, near Pleasants Peak, and on the northwest facing slopes of Mayhew Canyon.

*Lepechinia cardiophylla* is a perennial shrub in the mint family (Lamiaceae) that flowers from April to June. *Lepechinia cardiophylla* occurs in closed-cone coniferous forests (*Cupressus forbesii*, Tecate cypress), chaparral and cismontane woodlands at elevations of 1,785–4,453 feet (550–1,370 meters). Plants have been found on friant rocky fine sandy loam soils and Exchequer soils and commonly occur with *Cupressus forbesii* and *Ceanothus* sp. In Baja California, shrubs were found in a low-growing, xeric chaparral on volcanic derived soils with chamise. The species may be a fire follower; burned areas on the slopes of Sierra Peak contained a significantly higher number of *Lepechinia cardiophylla* plants than unburned areas

*Occurrences in IRAs:* There are 139.13 acres of mapped occurrences in the Coldwater (15.6 acres), Ladd (22.38 acres), and Trabuco (101.15 acres) IRAs on the CNF.

*Potential Effects:* Under Alternative 1, there would be no change to the existing zoning (59.62 BC, 79.43 BCNM, 0.07 BCMUR). Under Alternative 2, most of the BC would be changed to BCNM (131.87 acres), leaving 7.19 BC, and 0.07 BCMUR. Under Alternative 3, the BC and BCMUR would be the same as Alternative 2. Most of the BCNM would change to RW (108.2 acres), leaving 23.67 in BCNM. If effects are occurring under the BC zoning, they may be reduced under Alternatives 2 and 3 by the removal of motorized use on existing roads in BCNM areas. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (because those activities would not be permitted in RW). Effects on the occurrences in 0.07 acres of BCMUR would remain the same under all three alternatives.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.49 – *Lepechinia fragrans* (Fragrant Pitcher Sage; Island Pitcher Sage)**

*Species Information:* *Lepechinia fragrans* occurs in San Bernardino, Los Angeles, Ventura and Santa Barbara counties. The recorded occurrences are found in the San Gabriel and Santa Monica Mountains, and the Channel Islands. *Lepechinia fragrans* is a perennial shrub in the mint family (Lamiaceae). Occurrences of *Lepechinia fragrans* are found in canyon chaparral between 20 meters and 1,310 meters. Occurrences on Santa Rosa, Santa Cruz, and Santa Catalina islands occur on dry slopes in coastal sage scrub.

*Occurrences in IRAs:* There are 0.08 acres of mapped occurrences in the Westfork IRA (ANF), all in BC.

*Potential Effects:* For the Westfork IRA occurrence, the BC zoning for the 0.08 acres of mapped occurrences is the same for all three alternatives. As such, if effects are occurring to this species, they would not change from the existing conditions and would not differ between alternative.

Because the occurrences of this species have not been mapped for the West Fork IRA occurrence, it is not possible to quantitatively analyze the potential effects relative to LUZ. Since Alternative 2, in general, results in more restrictive LUZs than Alternative 1, it is assumed that Alternative 2 would remove some activities that may be affecting known occurrences. Further, since Alternative 3, in general, results in more RW than Alternative 1 or 2, it is assumed that it would remove even more activities that may be affecting known occurrences. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.50 – *Lepechinia rossii* (Ross' Pitcher Sage)**

*Species Information:* This species has been proposed by the ANF for addition to the Regional Forester's Sensitive species list. It may be considered Sensitive before the Record of Decision has been signed for this project; thus, it is being treated as Sensitive so that it would not be necessary to conduct another analysis later.

*Lepechinia rossii* (Lamiaceae) is a small weak-stemmed perennial shrub that flowers between May and September. Ross' pitcher sage is endemic to California and only known from three occurrences within Los Angeles and Ventura counties (Green Valley, Warm Springs Mountain, and Fillmore quadrangles). All three of the known occurrence records for this species are on the ANF.

*Lepechinia rossii* is generally found on rocky outcrops of reddish sedimentary rock, on north to northeast facing slopes; between 305-790 m in elevation. As with other *Lepechinia* species, *L. rossii* is generally associated with open areas and is appears to be in greatest abundance following fire or in areas affected by anthropogenic disturbance such as fuel breaks and road cuts.

*Occurrences in IRAs:* This species is known from the Red Mountain and Tule IRAs, on the ANF. These occurrences are not mapped; thus, it is not possible to display acreages by LUZ.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 99% of the Red Mountain IRA would be BCNM, and 92% of the Tule IRA would be BCNM. Under

Alternative 3, 98% of the Tule IRA would be in RW, and 99% of the Red Mountain IRA would be in RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.51 – *Lilium parryi* (Lemon Lily)**

*Species Information:* *Lilium parryi* occurs in the eastern Transverse Ranges (San Gabriel and San Bernardino Mountains) and northern Peninsular Ranges (San Jacinto Mountains, Volcan and Palomar Mountains) from Los Angeles County to San Diego County. It occurs with lesser abundance in the Santa Rita and Huachuca Mountains of Arizona and in adjacent ranges in Sonora, Mexico. *Lilium parryi* occurrences are recorded on the ANF, SBNF, and CNF. There are no known extant populations of *Lilium parryi* on the CNF.

*Occurrences in IRAs:* There are 0.39 acres of mapped occurrences in the Cactus Springs-B (0.23 acres in BC), Cactus Springs-B New (0.06 acres in BC), and Raywood Flat B (0.1 acres in BCMUR) IRAs.

*Potential Effects:* Under Alternative 1, the zoning (0.29 acres BC, 0.1 acres BCMUR) for the SBNF occurrences would not change. Under Alternative 2, 0.23 acres of BC on the SBNF would change to BCNM. Under Alternative 3, those 0.23 acres on the SBNF would become RW. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads in BCNM areas. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (because those activities would not be permitted in RW). Effects on the SBNF occurrences in 0.10 acres of BCMUR and 0.06 acres of BC would remain the same under all three alternatives.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.52 – *Limnanthes alba* var. *parishi* (Parish's Meadowfoam)**

*Species Information:* Formerly known as *Limnanthes gracilis* var. *parishii*, Parish's meadowfoam is endemic to the Peninsular Ranges of Riverside and San Diego counties. The largest occurrence is in Cuyamaca Valley near Cuyamaca Lake and Little Stonewall Creek. One population, encompassing about 5 acres (2 hectares), occurs in vernal pools on the Santa Rosa Plateau in southwestern Riverside County. Within NFS lands, *Limnanthes alba* var. *parishii* occurs on the CNF and the SBNF. Populations are known from the Descanso Ranger District

within the Laguna Mountain Recreation Area and on the Palomar Ranger District in Mendenhall Valley (CNF) and from K Flat and May Valley (SBNF).

*Limnanthes alba* var. *parishii* is an annual that flowers from April to June. *Limnanthes alba* var. *parishii* occurs in vernal moist areas and temporary seeps in montane meadows at elevations of 1,970-6,500 feet (600-2,000 meters). It appears to prefer growing with annuals and herbaceous perennials rather than grasses or shrubs. Studies on the species in the Cuyamaca Lake area found that populations occur fairly consistently in the same areas from year to year, unlike annuals associated with greater levels of habitat inundation.

*Occurrences in IRAs:* There are 64.87 acres of mapped occurrences of this species in the affected IRAs, all in the Barker Valley IRA. Of the 64.87 acres, 0.04 are in BC; the rest are in BCMUR.

*Potential Effects:* The zoning (0.04 acres BC and 64.83 acres BCMUR) and potential effects would remain the same under Alternative 1. Under Alternatives 2 and 3, most of the BCMUR and BC would become RW (54.69 acres). There would be 0.01 acres of BC and 10.17 acres of BCMUR. If effects are occurring under the current zoning, they may be reduced under Alternatives 2 and 3 by the removal of motorized use on existing roads in BCMUR areas that become RW. Additionally, these effects may be reduced for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (because those activities would not be suitable in RW). Effects on the occurrences in 0.01 of BC and 10.17 acres of BCMUR would remain the same under all three alternatives.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternatives 2 and 3 have the potential to be the most beneficial for this species over the long-term.

### **III-2.53 – *Linanthus orcuttii* (Orcutt's *Linanthus*)**

*Species Information:* *Linanthus orcutti*, Orcutt's linanthus, occurs primarily in the Peninsular Ranges in San Diego and Riverside counties. *Linanthus orcutti* also occurs in northern Baja California Norte, Mexico.

*Linanthus orcuttii* occurs on the CNF with potential habitat on the ANF. On the CNF, locations are known from Laguna Mountain, Palomar Mountain and within the Agua Tibia Wilderness.

*Linanthus orcutti* is a small herbaceous annual in the phlox family (Polemoniaceae) that blooms from May to June. *Linanthus orcutti* grows in openings in chaparral, lower montane coniferous forest, and pinyon-juniper woodland at elevations of 3,000–7,050 feet (915-2,145 meters). It usually grows in vernal moist openings, and is sometimes found in disturbed areas.

*Occurrences in IRAs:* While this species is known from the Caliente IRA (CNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternatives 2 and 3, 98% of the Caliente IRA would be BCNM or RW (with 95% RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.54 – *Malacothrix saxatilis* var. *arachnoidea* (Carmel Valley *Malacothrix*)**

*Species Information:* *Malacothrix saxatilis* var. *arachnoidea* is found primarily in the Carmel Valley watershed in Monterey County with a single disjunct occurrence in Santa Barbara County in the San Rafael Mountains. The species occurs throughout Carmel Valley and along Chupines, Conejo, and Tularcitos Creeks as far south as Tularcitos Rancho. There are two reported occurrences on the LPNF. One occurrence is in Monterey County near the Carmel Valley Road along Finch Creek and is reported to be partly within the LPNF. The second occurrence is on Little Pine Mountain, 8 miles above the Upper Oso gate.

*Malacothrix saxatilis* var. *arachnoidea* is a dicot in the sunflower family (Asteraceae). It is a perennial rhizomatous herb that blooms June through December. *Malacothrix saxatilis* var. *arachnoidea* is found in chaparral and coastal sage scrub habitats on rock outcrops, steep rocky (shale) road cuts, and loose gravelly soil, at elevations of 80–3,400 feet (25–1,215 meters). On Little Pine Mountain, *Malacothrix saxatilis* var. *arachnoidea* is found on calcareous soils on a steep south-facing slope.

*Occurrences in IRAs:* While this species is known from the Mudulce IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 94% of the Malduce IRA would be BCNM, CB, or RW (with 34% RW). Under Alternative 3, 97% of the Malduce IRA would be CB or RW (with 95% RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.55 – *Monardella australis* ssp. *jokersti* (Jokerst’s *Monardella*)**

*Species Information:* This species has been proposed by the ANF and SBNF for addition to the Regional Forester’s Sensitive species list. It may be considered Sensitive before the Record of Decision has been signed for this project; thus, it is being treated as Sensitive so that it would not be necessary to conduct another analysis later.

*Monardella australis* subsp. *jokersti* is a tufted or matted rhizomatous perennial that flowers from July through September. *Monardella* belongs to the Lamiaceae (or Labiatae, Mint Family). *Monardella australis* subsp. *jokersti* is restricted to the eastern San Gabriel Mountains of Los Angeles County, California in the vicinity of Cucamonga Peak and the western portion of Lytle Creek. There is also one possible waif collection from the Santa Ana River drainage in Riverside County. This species occurs on the western end of the SBNF and has potential to occur on the ANF. *Monardella australis* subsp. *jokersti* is rare and localized—there are 3 known localities, and one has not been seen since 1952.

*Monardella australis* subsp. *jokersti* is found at elevations from 1350-1750 m (4430-5740 feet), with possible waifs as low as 160 m (525 feet). It occupies steep scree or talus slopes between breccia, ravines, canyon bottoms, and secondary alluvial benches along drainages and washes. The soil is generally loamy, and derived from granite or mixed alluvium. The surrounding vegetation is chaparral, montane coniferous forest or woodland, or sometimes riparian.

*Occurrences in IRAs:* While this species is known from the Cucamonga-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Cucamonga-B: Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 94% of the Cucamonga-B IRA would be BCNM, RW (with 53% RW). Under Alternative 3, 94% of the Cucamonga-B IRA would be RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.56 – *Monardella linoides* ssp. *oblonga* (Flaxleaf *Monardella*, Tehachapi *Monardella*)**

*Species Information:* *Monardella linoides* ssp. *oblonga* occurs in the southern Sierra Nevada and Tehachapi Mountains from Tulare County to Kern and Ventura Counties. On the LPNF, *Monardella linoides* ssp. *oblonga* is found in the western Transverse Range in a polygon delimited by the following: Cerro Noroeste in the northwest, Frazier Mountain in the northeast, Alamo Mountain in the southeast, and San Guillermo Mountain in the southwest. Mount Pinos, near the north-central border of this polygon supports the greatest density of *Monardella linoides* ssp. *oblonga*. Plants have also been found near Brush Mountain in the Tecuya Mountains and

more plants are expected to be found elsewhere in the Tecuya Mountains. Except for a portion of one occurrence (near Boy Scout Camp), all known occurrences of *Monardella linoides* ssp. *oblonga* within the boundaries of the LPNF are on NFS land.

*Monardella linoides* ssp. *oblonga* is a rhizomatous perennial herb that blooms June–August. *Monardella linoides* ssp. *oblonga* grows among rock outcrops and general openings in mixed conifer forests, yellow pine forests, pinyon-juniper woodlands, and desert scrub habitat.

*Occurrences in IRAs:* There are 0.08 acres of mapped occurrences in the affected IRAs, all in the Sespe-Frazier IRA, all in BC.

*Potential Effects:* The zoning (0.08 acres BC) and potential effects would remain the same under Alternative 1. Under Alternatives 2 and 3, all of the 0.08 acres of occurrences in BC would become BCNM. If effects are occurring under the current BC zoning, they may be reduced under Alternatives 2 and 3 by the removal of motorized use on existing roads.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.57 – *Monardella macrantha* ssp. *hallii* (Hall’s *Monardella*)**

*Species Information:* *Monardella macrantha* subsp. *hallii* occurs in Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties, California (CNPS 2011). Occurrences are known from the CNF and SBNF.

*Monardella macrantha* ssp. *hallii* is a dicotyledon and member of the mint family (Lamiaceae). It is a perennial rhizomatous herb that blooms from June to August. *Monardella macrantha* ssp. *hallii* occupies valley-foothill grassland, chaparral, cismontane woodland, broad-leaved upland forest, and lower montane conifer forest between elevations of 2,400-7,200 feet (731-2,194 meters). It grows in rocky places and in openings in the vegetation such as near rocky rubble and boulders where shrub cover is limited. If present, the canopy may provide occasional shade. At Mount Laguna, the soil type consists of coarse sandy loam.

*Occurrences in IRAs:* There are 20.56 acres of mapped occurrences, all in BCNM, in the Barker Valley (6.68 acres), Caliente (6.66 acres), and Coldwater (7.22 acres) IRAs (CNF).

*Potential Effects:* The zoning (20.56 in BCNM) and potential effects would remain the same under Alternative 1. Under Alternative 2, most (13.34 acres) of the BCNM would become RW and 7.22 would remain in BCNM. Under Alternative 3, all 20.56 acres would be RW. If effects are occurring under the current zoning, they may be reduced under Alternatives 2 and 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (because those activities would not be permitted in RW).

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this



species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.58 – *Monardella nana ssp. leptosiphon* (San Felipe Monardella)**

*Species Information:* *Monardella nana ssp. leptosiphon* is endemic to the Peninsular Ranges in Riverside and San Diego counties, California, and also occurs in Baja California, Mexico. It is known from the CNF. The occurrences on the CNF are located on the south side of the Palomar Divide Truck Trail, along Barker Valley Trail, along Spur Road and High Point Truck Trail leading to High Point Lookout on Palomar Mountain, southeast of High Point Lookout, on a firebreak along oak Grove Truck Trail, in Pine Hills, at Fry Creek Campground, and one mile southeast of Inaja Picnic Area.

*Monardella nana ssp. leptosiphon* is a dicotyledon in the mint family (Lamiaceae). It is a matted or tufted, rhizomed perennial herb. *Monardella nana ssp. leptosiphon* inhabits chaparral, mixed conifer forest, and yellow pine forest, at elevations of 3,950–10,050 feet (1,200–1,855 meters). General habitats for *Monardella nana ssp. leptosiphon* appear to be widespread; however, there may be specific microhabitats that are much more narrowly distributed.

*Occurrences in IRAs:* There are 78.24 acres of mapped occurrences in the affected IRAs, all in the Barker Valley IRA (5.58 acres BC, 3.7 acres BCMUR, and 68.96 acres BCNM).

*Potential Effects:* The zoning (5.58 acres BC, 3.7 acres BCMUR, and 68.96 acres BCNM) and potential effects would remain the same under Alternative 1. Under Alternatives 2 and 3, the BCMUR and BCNM would be changed, resulting in 6.84 acres of BCNM and 65.83 acres of RW. The 5.58 acres of BC would remain the same as in Alternative 1. If effects are occurring under the current zoning, they may be reduced under Alternatives 2 and 3 due to the removal of motorized and mechanical vehicles/equipment and reduced availability for activities under Special Use permits.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 2 and 3 have the potential to be the most beneficial for this species over the long-term.

### **III-2.59 – *Navarretia peninsularis* (Baja Navarretia)**

*Species Information:* *Navarretia peninsularis* occurs in the Breckenridge Mountains of Kern County; in the San Rafael Mountains of Santa Barbara County; the western Transverse Range in Kern and Ventura counties; the San Bernardino Mountains of San Bernardino County; and south to Baja California. *Navarretia peninsularis* is a dicot in the phlox family (Polemoniaceae). *Navarretia peninsularis* is an annual herb that blooms June-August.

*Navarretia peninsularis* grows in mesic openings in chaparral, pinyon woodland, and Jeffrey pine forest. In some locations, plants are found along vernal creeks, in meadows, and in snowmelt seeps within pinyon-juniper woodland and yellow pine forest. On the LPNF, *Navarretia peninsularis* grows in open to moderately dense stands of annual herbs and often *N. peninsularis* is found in the understory of this herb layer. Taller annuals, such as *Lessingia*,

*Linanthus*, and *Lotus*, provide the overstory. As a result, *N. peninsularis* is easily overlooked and not easily detected. These stands of annual plants are generally found adjacent to and just upslope from moist or wet meadows where there is a continuous or nearly continuous cover of perennial herbs and associated leaf litter. *Navarretia peninsularis* is also found in ruderal sites such as roadsides, road ditches, lightly used vehicle tracks, and disturbed patches in meadow vegetation.

*Occurrences in IRAs:* There are 0.16 acres of mapped occurrences of this species in the affected IRAs, with 0.08 acres in DAI in the Sawmill-Badlands IRA and 0.08 acres in BC in the Sespe-Frazier IRA (LPNF).

*Potential Effects:* The zoning (0.08 acres of DAI and 0.08 acres of BC) and potential effects would remain the same under Alternative 1. Under Alternatives 2 and 3, the DAI would remain the same while the 0.8 acres of BC would change to BCNM. If effects are occurring under the current zoning, they may be reduced under Alternatives 2 and 3 due to the removal of motorized vehicle use on existing roads.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternatives 2 and 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.60 – *Nolina cismontana* (Chaparral Nolina; Chaparral Beargrass; Peninsular Beargrass)**

*Species Information:* *Nolina cismontana* is distributed in coastal drainages and foothills below 3000 feet from Ventura to Orange counties, with a few isolated populations in San Diego County. Occurrences are known from the foothills of the Santa Ynez Mountains, south through the Simi Hills and Santa Ana Mountains to the foothills west of the Pala, Palomar, Viejas, and Cuyamaca Mountains. *Nolina cismontana* occurs in a handful of patchy locations within the CNF.

*Nolina cismontana* is few to many-branched shrub (sub shrub), 18 – 54 inches tall. *Nolina cismontana* primarily occurs in open chaparral and Diegan Sage Scrub with xeric sandstone and gabbro-based substrates. Orange County populations have been observed on Cieneba soils where erosion is substantial; Las Posas fine sandy loams are mapped for the San Luis Rey River population. This *Nolina* species also occurs on other soil types including Lodo, Calleguas-Arnold complex, and Anaheim.

*Occurrences in IRAs:* There are 137.38 acres of mapped occurrences, all in BCNM, in the Trabuco IRA (CNF).

*Potential Effects:* The zoning (137.38 acres of BCNM) and potential effects would remain the same under Alternatives 1 and 2. Under Alternative 3, all of the BCNM occurrence acres would change to RW. If effects are occurring under the current zoning, they may be reduced under Alternative 3 due to the removal of some activities under Special Use permit and the removal of mountain bikes from existing trails.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.61 – *Opuntia basilaris* ssp. *brachyclada* (Short-Jointed Beavertail Cactus)**

*Species Information:* *Opuntia basilaris* var. *brachyclada* (Cactaceae) is a perennial stem succulent. *Opuntia basilaris* var. *brachyclada* is one of three varieties of *Opuntia basilaris* in the cactus family (Cactaceae). Many populations are of intermediate morphology, and are probably intergrades. *Opuntia basilaris* var. *brachyclada* occurs along the northern slopes of the San Gabriel and San Bernardino Mountains within Los Angeles and San Bernardino counties, California.

*Opuntia basilaris* var. *brachyclada* is known to occur in chaparral, Joshua tree woodland, Mojave Desert scrub, and pinyon-juniper woodland communities at 425-1800 meter elevations. It has been reported from a variety of soils, from sandy to rocky, in open stream beds, alluvial fans, and on rocky slopes.

*Occurrences in IRAs:* This species is known from the Fish Canyon, Red Mountain, Sepse-Frazier, and Tule IRAs, all on the ANF. These occurrences are not mapped; thus, it is not possible to display acreages by LUZ.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 98% of the Fish Canyon IRA would be BCNM or RW, 99% of the Red Mountain IRA would be BCNM, and 94% of the Sespe-Frazier IRA would be BCNM, CB, RW, or EW. Under Alternative 3, 95% of the Sespe-Frazier IRA would be BCNM, CB, RW, or EW (with 41% in RW), 99% of the Red Mountain IRA would be in RW, and 99% of the Fish Canyon IRA would be in BCNM or RW.

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.62 – *Parnassia cirrata* var. *cirrata* (Fringed Grass-of-Parnassus)**

*Species Information:* *Parnassia cirrata* var. *cirrata* is endemic to the San Gabriel and San Bernardino mountains of Los Angeles and San Bernardino counties in southern California. All known occurrences of *Parnassia cirrata* var. *cirrata* are on NFS lands with the exception of the Gilman Canyon occurrence for which actual land ownership is unknown. Four occurrences are located on the ANF. These occurrences include Alder Gulch, Yucca Flats, and the North Fork of the San Gabriel River near Falling Springs. Four occurrences are located on the SBNF at Mill

Creek Mine, Vivian Creek, Falls Creek and possibly Gilman Canyon. There is also a collection from Falls Creek at Dobb's Cabin.

*Parnassia cirrata* var. *cirrata* is a dicotyledon in the saxifrage family (Saxifragaceae). This perennial herb blooms between August-September. *Parnassia cirrata* var. *cirrata* inhabits mesic areas in lower and upper montane coniferous forest between 2,135-3,000 m. On the ANF, *Parnassia cirrata* var. *cirrata* appears to be associated with calcareous seeps. On the SBNF, this species occurs in moist washes, springy meadows, and streamsides within lodgepole pine forest and ponderosa pine forest.

*Occurrences in IRAs:* While this species is known from the Raywood Flat-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Raywood Flat-B IRA would be BCNM, RW, or EW. Under Alternative 3, 92% of the IRA would be in those same categories (with 91% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.63 – *Penstemon californicus* (California Beardtongue; California Penstemon)**

*Species Information:* *Penstemon californicus* occurs in California only in the San Jacinto and Santa Rosa Mountains, with a doubtful historic occurrence near Aguanga. The range of this species also includes Sierra Juarez and Sierra de San Pedro Martir in Baja California Norte. The known occurrences of *Penstemon californicus* on the SBNF are distributed in and around Garner Valley, Quinn Flat, east of Toro Peak, near Kenworthy Station, and Desert Divide.

*Penstemon californicus* is a dicotyledon in the plantain family (*Plantaginaceae*). This species flowers from May-June in California. *Penstemon californicus* inhabits sandy or rocky soils in chaparral, yellow pine forest, or pinyon/juniper woodland between 1200-2300 m. This species has also been found in lower montane coniferous forest, generally at the ecotone with chaparral.

*Occurrences in IRAs:* There are 14.74 acres of mapped occurrences in the affected IRAs. All are in the Pyramid Peak-A IRA (SBNF), with 6.18 acres in BC and 8.56 acres in RW.

*Potential Effects:* The zoning (6.18 acres BC and 8.56 acres RW) and potential effects would remain the same under Alternative 1. Under Alternative 2, all of the BC occurrence acres would change to BCNM. Under Alternative 3, all 14.74 acres would be in RW. If effects are occurring under the current zoning, they may be reduced under Alternative 2 where occurrences in BC become BCNM due to the removal of motorized vehicles on existing roads. They may be further

reduced in Alternative 3 due to the removal of some activities under Special Use permit and the removal of mountain bikes from existing trails under RW zoning.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.64 – *Phacelia excilis* (Transverse Range *Phacelia*)**

*Species Information:* *Phacelia excilis* is currently on the Regional Forester's Sensitive species list. However, it is being proposed for removal from the list. The new Sensitive species list is expected to be finalized sometime in 2013. For the purposes of this evaluation, it is being considered as Sensitive. *Phacelia excilis* occurs in the western Transverse Range and Sierra Nevada in Tulare, Kern, Ventura, Los Angeles, and San Bernardino counties. *Phacelia excilis* occurs in the SBNF in the Big Bear area, and possibly from the Western Transverse Range on the ANF and LPNF. *Phacelia excilis* is a dicotyledon in the waterleaf family (Hydrophyllaceae). It was previously described as a variety of Mojave phacelia (*Phacelia mohavensis*).

*Phacelia excilis* is a short-lived annual herb that flowers in June and July. *Phacelia excilis* grows on moist sandy or gravelly substrates in montane coniferous forest, meadows and seeps, and dry streambeds at elevations of 3,600–8,850 feet (1,100–2,700 meters). In the Big Bear area, *Phacelia excilis* occurs in openings of conifer forest associated with seasonal or ephemeral drainages, and within moist areas of pebble plains. Plant abundance is strongly correlated with annual rainfall, and known occurrences may be less vigorous or absent in a below-average rainfall year.

*Occurrences in IRAs:* While this species is known from the Sespe-Frazier IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 94% of the Sespe-Frazier IRA would be BCNM, CB, RW, or EW. Under Alternative 3, 95% of the Sespe-Frazier IRA would be in those same categories (with 41% in RW). Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.65 – *Phacelia keckii* (Santiago Peak *Phacelia*)**

*Species Information:* *Phacelia keckii* (formerly *Phacelia suaveolens* ssp. *keckii*), Santiago Peak *Phacelia*, is found in the Santa Ana Mountains in Orange and Riverside Counties. Occurrences are known near Santiago Peak, Modjeska Peak, and Pleasants Peak in the Santa Ana Mountains.

The plant is also reported from Arroyo Seco Creek near Wild Horse Peak in the Agua Tibia Wilderness Area of the CNF in Riverside County.

*Phacelia keckii* (Hydrophyllaceae) is an annual herb that flowers from May–June. *Phacelia keckii* occurs on stream alluvium, volcanic soils, and other open sites within chaparral and knobcone pine stands and is seen in greatest abundance following fires. Populations are reported at elevations of 1,800-5,000 feet (545-1,600 meters).

*Occurrences in IRAs:* There are 50.06 acres of mapped occurrences in the affected IRAs (all on the CNF): 48.95 acres of BCNM in the Coldwater IRA, 1.06 acres of BC in the Ladd IRA, and 0.05 acres of BC in the Trabuco IRA.

*Potential Effects:* The zoning (48.95 BCNM and 1.11 BC) and potential effects would remain the same under Alternatives 1 and 2. Under Alternative 3, all of the BCNM and part of the BC would become RW for a total of 49.0 acres RW and 1.06 acres BC. If effects are occurring under the current zoning, they may be reduced under Alternative 3 where occurrences in BC and BCNM become RW due to the removal of some activities under Special Use permit and the removal of mountain bikes from existing trails under RW zoning.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.66 – *Saltugilia latimeri* (Latimer’s Woodland Gilia)**

*Species Information:* *Saltugilia latimeri*, a dicot, is an annual herb native to California. It is in the Polemoniaceae family that blooms from March to June. It is found in rocky or sandy, often granitic areas in chaparral, Mojavean desert scrub, and pinyon/juniper woodlands. It is known from Inyo, Kern, Riverside, and San Bernardino Counties from fewer than 20 occurrences (CNPS; <http://www.rareplants.cnps.org/detail/8.html>).

*Occurrences in IRAs:* There are 0.38 acres of mapped occurrences in the Cactus Springs-B IRA (SBNF), all in BC.

*Potential Effects:* The zoning (0.38 acres in BC) and potential effects would remain the same under Alternative 1. Under Alternative 2, those acres would be in BCNM. Under Alternative 3, they would become RW. If effects are occurring under the current zoning, they may be reduced under Alternative 2 by the removal of motorized vehicle use. They may be further reduced under Alternative 3 due to the removal of motorized and mechanical vehicles/equipment and reduced availability for activities under Special Use permits.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.67 – *Satureja chandleri* (San Miguel Savory)**

*Species Information:* *Satureja chandleri*, San Miguel savory, is known from the Peninsular Ranges of Orange, Riverside, and San Diego counties and from Baja California, Mexico. On the CNF, it is known from Lion Canyon below the San Juan picnic area, San Juan Canyon upstream from the San Juan picnic area, Hot Springs Canyon, and along Chiquito Springs south of Blue Jay Campground.

*Satureja chandleri* is an erect shrub perennial herb in the mint family (Lamiaceae) that blooms March–July. *Satureja chandleri* occurs on soils derived from gabbro or metavolcanics in shaded areas of chamise chaparral, coastal scrub, oak woodlands, riparian woodlands, and grasslands at elevations of 390–3,525 feet (120–1,075 meters). Disjunct occurrences in the Santa Ana Mountains appear to occupy habitat that is more mesic than populations in San Diego County and Baja California.

*Occurrences in IRAs:* There are 264.52 acres of mapped occurrences of this species in affected IRAs, all in the Trabuco IRA (CNF), all in BCNM.

*Potential Effects:* The zoning (264.52 acres in BCNM) and potential effects would remain the same under Alternatives 1 and 2. Under Alternative 3, all of the BCNM would become RW. If effects are occurring under the current zoning, they may be reduced under Alternative 3 where occurrences in BCNM become RW due to the removal of some activities under Special Use permit and the removal of mountain bikes from existing trails under RW zoning.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.68 – *Sedum niveum* (Davidson's Stonecrop)**

*Species Information:* *Sedum niveum* occurs in the San Bernardino and Santa Rosa mountains of Southern California and in Baja California, Mexico. Occurrences have also been documented from the New York Mountains in the Mojave Desert. Within the Santa Rosa Mountains, plants are found on Toro Peak and Santa Rosa Mountain. In the San Bernardino Mountains, occurrences are known from Sugarloaf and Charlton peaks, on the south side of Van Dusen Canyon, above Dry Canyon, at Snow Canyon, and above Dollar Lake and on the east side of Forest Road 2N93. *Sedum niveum* has also been recorded from Observatory Peak in the Sierra San Pedro Martir of Baja California, Mexico. A record from Snow Canyon may also be within or near the northern boundary of the San Jacinto Wilderness of the SBNF. The occurrence on Toro Peak is on the Santa Rosa Indian Reservation.

*Sedum niveum* is a prostrate glabrous perennial herb in the stonecrop family (Crassulaceae). Flowering occurs between late June and early August. Occurrences of *Sedum niveum* are found on steep, north-facing slopes on rocky ledges and in crevices composed of granitic or carbonate substrate. Some occurrences have been found on northeast- or northwest-facing slopes, but plants are generally shaded by rocks in these cases. Minimal sunlight exposure and summer thundershowers maintain moist soil for *Sedum niveum* plants. The plant is also purported to

thrive on leaf mold derived from fallen pine needles. In southern California, occurrences are found between 5,450 and 9,685 feet in elevation, while in Baja California, Mexico, elevation range is 8,290 to 9,215 feet.

*Occurrences in IRAs:* There are 0.08 acres of mapped occurrences of this species in the affected IRAs, all in the Cactus Springs-B IRA, all BC.

*Potential Effects:* The zoning (0.08 acres in BC) and potential effects would remain the same under Alternative 1. These acres would be changed to BCNM under Alternative 2 and RW under Alternative 3. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads in BCNM areas. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (for those activities that would not be permitted in RW).

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.69 – *Sidalcea hickmanii* ssp. *parishii* (Parish's Checkerbloom)**

*Species Information:* *Sidalcea hickmanii* ssp. *parishii* is known from the outer South Coast Ranges, the Western Transverse Ranges, and the San Bernardino Mountains. It is known from the La Panza Range and the San Rafael, Sierra Madre, and San Bernardino Mountains. *Sidalcea hickmanii* ssp. *parishii* occurs on the LPNF and SBNF and has the potential to occur on the ANF.

On the LPNF, *Sidalcea hickmanii* ssp. *parishii* occurs on the Santa Lucia Ranger District (American Canyon in the La Panza Range and along Sierra Madre Ridge), the Santa Barbara Ranger District (San Rafael Mountains from Hell's Half Acre to McKinley Mountain to Big Pine Mountain), and the Mount Pinos Ranger District (Sierra Madre Ridge from McPherson Peak to west of Montgomery Potrero). On the SBNF, it is currently known from Barton Flats, Hawes Ranch, and near the Santa Ana River. Additionally, there are historic records for this species from other locations on the SBNF.

*Sidalcea hickmanii* ssp. *parishii* is a dicot in the mallow family (Malvaceae). *Sidalcea hickmanii* ssp. *parishii* is a perennial herb that blooms June-August. *Sidalcea hickmanii* ssp. *parishii* grows in chaparral, cismontane woodland, and montane conifer habitat at elevations of 3,300–8,200 feet (1,000–2,500 meters). *Sidalcea hickmanii* ssp. *parishii* is a fire-follower. Habitat for *Sidalcea hickmanii* ssp. *parishii* varies over time in response to wildfire and the post-fire response of the vegetation. Dense, mature stands of chaparral and woodland are generally unsuitable for *Sidalcea hickmanii* ssp. *parishii* until after wildfire has removed the bulk of the competing vegetation. *Sidalcea hickmanii* ssp. *parishii* may remain on-site after vegetative recovery has occurred but only in open areas – areas that are usually subject to some sort of periodic disturbance other than fire. Roadsides, cut road banks, and fuelbreaks often provide this type of disturbed habitat.



*Occurrences in IRAs:* This species is known from the Fox Mountain, Machesna Mountain, and Spoor Canyon IRAs on the LPNF. There is a historic record in the Raywood Flat-B IRA (SBNF). However, none of these occurrences have been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 92% of the Raywood Flat-B IRA would be BCNM, RW, or EW, 96% of the Machesna Mountain IRA would be BCNM or EW, 85% of the Spoor Canyon IRA would be BCNM, and 98% of the Fox Mountain IRA would be BCNM. Under Alternative 3, 99+% of the Fox Mountain IRA would be RW, 99+% of the Spoor Canyon IRA would be RW, 99% of the Machesna Mountain IRA would be in EW or RW, and 92% of the Raywood Flat-B IRA would be in BCNM, RW, or EW (with 91% in RW).

Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.70 – *Sidotheca emarginata* (White-Margined Starry Puncturebract)**

*Species Information:* This species was formerly known as *Oxytheca emarginata*. *Sidotheca emarginata* is endemic to the San Jacinto and Santa Rosa Mountains of Riverside County, California. *Sidotheca emarginata* occurs on the SBNF. Most occurrences are found in and around the Garner Valley, an area with two active grazing allotments. This species is reported from historic collections on the northwest slope of the Santa Rosa Mountains and from the Pines to Palms Trail, Pipe Creek, Hidden Lake area in the San Jacinto State Park and Tahquitz Peak in the San Jacinto Mountains. More recent collections are known from Garner Valley Ranch, Pinyon flats, and Spitler Peak Trail.

*Sidotheca emarginata* is a dicotyledon in the buckwheat family (Polygonaceae). This annual herb blooms from February – August. *Sidotheca emarginata* occurs at elevations of 3,900–8,200 feet (1,190–2,500 meters) on gravelly soils in openings within chaparral, lower montane coniferous forest, and pinyon-juniper woodlands.

*Occurrences in IRAs:* There are 1.53 acres of mapped occurrences of this species in the affected IRAs. The occurrences are in the Cactus Springs-B (0.99 acres) and Cactus Springs-B New (0.54 acres) IRAs. All of the mapped occurrences are in BC.

*Potential Effects:* The zoning (1.53 acres in BC) and potential effects would remain the same under Alternative 1. Under Alternative 2, 0.26 acres would remain BC while the rest (1.27 acres) would become BCNM. Under Alternative 3, those BCNM acres would become RW. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of

motorized use on existing roads in BCNM areas. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (for those activities that would not be permitted in RW).

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.71 – *Streptanthus bernardinus* (Laguna Mountains Jewelflower)**

*Streptanthus bernardinus* is currently on the Regional Forester's Sensitive species list. However, the four southern California National Forests proposed removing it from the list in 2012. It is being evaluated here since it is currently still considered Sensitive.

*Species Information:* *Streptanthus bernardinus* occurs in the eastern Transverse Range and Peninsular Range in California. Its range may extend to Baja California (Buck, Taylor & Knuckeberg 1993), but this has not been verified. *Streptanthus bernardinus* is known from a number of occurrences on the SBNF. In the San Bernardino Mountains, this species occurs near Green Valley Lake, Little Green Valley, Crab Flats, Snow Valley, Running Springs, Cleghorn Ridge, the Lake Arrowhead area, Big Bear Lake dam area, and north and east of Fawnskin. This species appears to be most abundant in the Green Valley-Crab Flats area.

*Streptanthus bernardinus* also occurs at San Sevaine and the head of the south fork of Lytle Creek in the San Gabriel Mountains. In Riverside County, this species is found in the Millard Canyon RNA at the south end of the San Bernardino Mountains., in the San Jacinto Mountains near Dark Canyon Campground, and in areas within Mt. San Jacinto State Park. There is one occurrence at Hall Canyon that extends from the UC Riverside James Preserve to the SBNF in the Hall Canyon RNA. *Streptanthus bernardinus* also occurs in a few areas of the Laguna Mountains in the Descanso Ranger District of the CNF (USDA Forest Service 2003).

*Streptanthus bernardinus* is a dicotelydon in the mustard family (Brassicaceae). This perennial blooms from June-July (Munz 1974). *Streptanthus bernardinus* inhabits lower montane coniferous forest between 1200-2500 m. It may occupy mesic areas such as streamsides or drier openings within the forest understory on granitic gravel or sand. *Streptanthus bernardinus* grows in open areas, including road cuts, skid trails, and natural forest openings with low litter accumulation. This species appears to tolerate somewhat disturbed areas, colonizing disturbed areas after the disturbance element has been removed.

*Occurrences in IRAs:* While this species is known from the Cucamonga-B IRA (SBNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 94% of the Cucamonga-B IRA would be BCNM, RW (with 53% RW). Under Alternative 3, 94% of the Cucamonga-B IRA would be RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects.

Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.72 – *Streptanthus campestris* (Southern Jewelflower)**

*Species Information:* *Streptanthus campestris* occurs in the Transverse and Peninsular Ranges from Santa Barbara County to San Diego County and northern Baja California. Two occurrences are on the LPNF in the San Rafael and Santa Ynez Mountains, one near Madulce Peak and one near Divide Peak. At least one occurrence is on the SBNF and other occurrences reported from the San Jacinto, and Santa Rosa Mountains are on or adjacent to the SBNF. Occurrences at the south end of the Laguna Mountains are on or adjacent to the CNF.

*Streptanthus campestris* is a dicot in the mustard family (Brassicaceae). *Streptanthus campestris* is a short-lived perennial that typically flowers from May–July. *Streptanthus campestris* grows on rocky soils in chaparral (including high desert transitional chaparral), conifer forest, and pinyon-juniper woodlands.

*Occurrences in IRAs:* There are 0.08 acres of mapped occurrences of this species in the affected IRAs. The occurrences are in the White Ledge IRA (LPNF), all in BCNM.

*Potential Effects:* The zoning (0.08 acres in BCNM) and potential effects would remain the same under Alternatives 1 and 2. Under Alternative 3, those BCNM acres would become RW. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads in BCNM areas. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (for those activities that would not be permitted in RW).

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.73 – *Tetracoccus dioicus* (Parry's Tetracoccus)**

*Species Information:* *Tetracoccus dioicus*, Parry's tetracoccus, is known from coastal southern California; the Peninsular Range foothills of Orange, Riverside, and San Diego counties; and Baja California, Mexico. This species shows a preference for Los Posas soils. One population was recorded in 1948 from NFS lands located near the San Juan Campground, Trabuco Ranger District (CNF).

*Tetracoccus dioicus* is a deciduous shrub in the Euphorbiaceae family that blooms from April–May. *Tetracoccus dioicus* occurs on dry, stony slopes composed of gabbro-derived soils in chaparral and coastal scrub communities at elevations of 485–3,250 feet (165–1,000 meters).

*Occurrences in IRAs:* There are 6.5 acres of mapped occurrences of this species in the affected IRAs, all in the Trabuco IRA (CNF), all in BCNM.

*Potential Effects:* The zoning (6.5 acres in BCNM) and potential effects would remain the same under Alternatives 1 and 2. Under Alternative 3, those BCNM acres would become RW. If effects are occurring under the BC zoning, they may be reduced under Alternative 2 by the removal of motorized use on existing roads in BCNM areas. These effects may be further reduced under Alternative 3 for occurrences in RW if effects were occurring from mountain biking and activities under Special Use permits (for those activities that would not be permitted in RW).

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternative 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.74 – *Thermopsis californica* var. *semota* (Velvety False Lupine; California Goldenbanner)**

*Species Information:* *Thermopsis californica* var. *semota*, velvety false lupine, is endemic to the Palomar and Laguna Mountains in San Diego County. Within the NFS lands, *Thermopsis californica* var. *semota* occurs in the Descanso and Palomar Ranger Districts on the CNF.

*Thermopsis californica* var. *semota* is a perennial rhizomatous herb in the pea family (Fabaceae) that blooms March–June. *Thelypteris puberula* var. *sonorensis* grows in meadows, seeps, and along streams in foothill canyons to around 2,000 feet (610 meters).

*Occurrences in IRAs:* There are 5.73 acres of mapped occurrences of this species, all in BCNM, in the Sill Hill IRA (CNF).

*Potential Effects:* The zoning (5.73 acres in BCNM) and potential effects would remain the same under Alternatives 1. Under Alternative 2, 5.26 acres would move to RW and the remaining 0.47 acres would stay in BCNM. Under Alternative 3, all of the acres would be RW. If effects are occurring under the BCNM zoning, they may be reduced under Alternatives 2 and 3 by the removal of mountain bikes and activities under Special Use permits (for those activities that would not be permitted in RW).

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The long-term effects of Alternatives 2 and 3 may be beneficial for this species. Of the three alternatives, Alternative 3 has the potential to be the most beneficial for this species over the long-term.

### **III-2.75– *Thermopsis macrophylla* (San Ynez False Lupine)**

*Species Information:* *Thermopsis macrophylla* is known from fewer than 15 occurrences in the Santa Ynez Mountains of Santa Barbara County, from La Cumbre Peak to about two miles west of Santa Ynez Peak. All ten known occurrences of *Thermopsis macrophylla* are on the Santa Barbara Ranger District of the LPNF. They range from Santa Ynez Peak east to Camino Cielo Road and La Cumbre Peak.

*Thermopsis macrophylla* is a dicot in the legume family (Fabaceae). *Thermopsis macrophylla* is a perennial rhizomatous herb that blooms April-June. *Thermopsis macrophylla* grows on shallow, gravelly sandy loams derived from Matilija sandstone. Some occurrences are found in disturbed areas such as fuel breaks.

*Occurrences in IRAs:* While this species is known from the Tequepis IRA (LPNF), occurrences have not been mapped and no acreages are available.

*Potential Effects:* Because the occurrences of this species have not been mapped, it is not possible to quantitatively analyze the potential effects relative to LUZ. Under Alternative 2, 74% of the Tequepis IRA would be BCNM. Under Alternative 3, 87% of the IRA would be in RW. Without knowing exact locations of the occurrences relative to the current and proposed LUZs, it is difficult fully assess the potential effects. Nonetheless, based on the percentage of the IRAs that would become more restrictive under Alternatives 2 or 3, it is likely that the occurrence locations may be in areas becoming more restrictive. Thus, it is very likely that either Alternative 2 or 3 may result in beneficial effects by reducing the levels of potential disturbance to the species and habitat if the occurrences are in one of the more restrictive LUZs.

*Determination of Effects:* It is my determination that Alternative 2 or 3 would not negatively affect this species. The effects of Alternative 2 or 3 may be beneficial to this species.

### **III-2.76 – Effects of Monitoring Alternatives**

See **Section II-3.3** for a discussion of potential effects from the monitoring and evaluation alternatives included in the project. That discussion applies here for Sensitive species.

### **III-2.77– Summary for Sensitive Plants**

The discussions above display that for each of the individual Sensitive plant species that occur in any of the affected IRAs, the effects of Alternative 2 or 3 may help reduce currently-occurring effects from activities allowed under the current zoning.

None of the alternatives, including Alternative 1 (No Action) are expected to result in effects that would threaten the viability of any of the Sensitive plants known or likely to occur in any of the affected IRAs.

In general, with the increase of BCNM land use zone and reduction of suitable uses, Alternative 2 may result in greater potential beneficial effects to Sensitive plants than Alternative 1. Alternative 3 may result in the greatest level of potential beneficial effects of the three alternatives due to the greatest increase in RW and greatest reduction in uses/activities that may affect Sensitive plants.

In terms of total acreage of all Sensitive plant species known to occur in the affected IRAs, Alternative 2 may reduce potential effects that may threaten species viability; and Alternative 3 may further reduce those potential threats. **Table 14** provides a comparison for acres of all Sensitive plant occurrences (1,253.98 acres) known from each LUZ for each alternative.

<b>Table 14. Summary of Mapped Sensitive Plant Occurrence Acres by LUZ <sup>1</sup></b>						
<b>BC</b>	<b>BCMUR</b>	<b>BCNM</b>	<b>CB</b>	<b>DAI</b>	<b>RW</b>	<b>Grand Total</b>
<b>Alternative 1</b>						
104.81 (9%)	140.94 (11%)	714.20 (57%)	251.10 (20%)	26.02 (2%)	16.93 (1%)	1,253.98
<b>Alternative 2</b>						
19.39 (1%)	60.77 (5%)	654.36 (52%)	251.10 (20%)	20.77 (2%)	247.61 (20%)	1,253.98
<b>Alternative 3</b>						
19.34 (1%)	60.77 (5%)	35.74 (3%)	0 (0%)	20.77 (2%)	1,117.36 (89%)	1,253.98
<sup>1</sup> This table only includes Sensitive plant occurrences that are mapped in the Forest Service NRIS database. A number of Sensitive plants are not mapped and no acreages are available.						

**Table 14** only displays occurrences that have been mapped and are in GIS. Other occurrences that have not been mapped (as discussed above) of Sensitive species are known to occur in the affected IRAs. Because of the lack of mapped data, it is not possible to quantify the potential effects. Nonetheless, it is likely that the comparisons presented in **Table 14** are similar for those unmapped species as well as any undetected Sensitive plant occurrences.

In summary, under Alternative 1 (No Action), approximately 42% of the mapped Sensitive plant acres may be experiencing effects associated with activities that may have a greater risk of effects to them or their habitats (*e.g.*, motorized/mechanized use of roads and trails, special use permitted activities, etc.) because they are in BC, BCMUR, CB, or DAI. Under Alternative 2, approximately 28% of the mapped Sensitive plant acres are in BC, BCMUR, CB, or DAI. Under Alternative 3, 8% of mapped Sensitive plant acres are in BC, BCMUR, CB, or DAI. Thus, the potential beneficial effects of Alternative 2 are greater than in Alternative 1; and the potential beneficial effects of Alternative 3 are greater than either Alternative 1 or 2.

None of the monitoring/evaluation alternatives (Alternative A, B, and C) are expected to have effects to Sensitive plants. Changing the monitoring methodology, in itself, is not expected to result in effects to Sensitive species or their management.

### **III-3.0 – DETERMINATION OF EFFECTS**

**Alternative 1 (No Action):** Alternative 1 is continued implementation of the FEIS for the LMP (2006); the viability assessments and determinations of effects would not change from those made in the supporting biological documents for the selected alternative in the 2006 FEIS. The supporting documents in that Project Record are incorporated here by reference.

Alternative 2 (Proposed Action): It is my determination that Alternative 2 would not negatively impact or affect the viability of any Sensitive plant species discussed above as well as any undetected Sensitive plant species. The long-term effects of Alternative 2 may be beneficial for Sensitive plants.

Alternative 3 (Recommended Wilderness Emphasis): It is my determination that Alternative 3 would not negatively impact or affect the viability of any Sensitive plant species discussed above as well as any undetected Sensitive plant species. The long-term effects of Alternative 3 may be beneficial for Sensitive plants.

Alternatives A, B, C for Monitoring and Evaluation: It is my determination that none of the alternatives would impact or affect the viability of any of the Sensitive plant species discussed above.

<b>Table 15. Summary of Effects Determinations for Sensitive Species In the Analysis Area</b>		
<b>Common Name</b>	<b>Occurrence Information</b>	<b>Determinations for Alternatives 2 and 3<sup>1</sup></b>
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Allium howellii</i> var. <i>clokeyi</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Arctostaphylos pilosula</i>	Black Mountain (LPNF), Machesna Mountain (LPNF)	NI/BI
<i>Arctostaphylos refugioensis</i>	Tequepis (LPNF)	NI/BI
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i>	Raywood Flat B (SBNF)	NI/BI
<i>Astragalus bicristatus</i>	Cactus Springs B (SBNF)	NI/BI
<i>Astragalus deanii</i>	Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, Upper San Diego River (CNF)	NI/MAI
<i>Astragalus oocarpus</i>	Barker Valley, Eagle Peak (CNF)	NI/BI
<i>Boechera johnstonii</i>	Pyramid Peak A (SBNF)	NI/BI
<i>Botrychium crenulatum</i>	Raywood Flat B (SBNF)	NI/BI
<i>Brodiaea orcuttii</i>	Barker Valley, Sill Hill (CNF)	NI/BI
<i>Calochortus clavatus</i> ssp. <i>clavatus</i> <sup>2</sup>	Fish Canyon (ANF), Red Mountain (ANF), Salt Creek (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI <sup>2</sup>
<i>Calochortus clavatus</i> ssp. <i>gracilis</i>	Fish Canyon (ANF), Red Mountain (ANF), Salt Creek (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI
<i>Calochortus dunnii</i>	Sill Hill (CNF)	NI/BI
<i>Calochortus palmeri</i> var. <i>munzii</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Garcia Mountain (LPNF), Machesna Mountain (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Calochortus plummerae</i> <sup>3</sup>	Raywood Flat B (SBNF), West Fork (ANF), Westfork (ANF)	NI/BI <sup>3</sup>
<i>Calochortus simulans</i>	Garcia Mountain (LPNF), Machesna Mountain (LPNF), Spoor Canyon (LPNF)	NI/BI
<i>Calochortus weedii</i> var. <i>intermedius</i>	Coldwater, Ladd (CNF)	NI/BI
<i>Calochortus weedii</i> var. <i>vestus</i>	Dry Lakes (LPNF), Sespe – Frazier (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI

Table 15. Summary of Effects Determinations for Sensitive Species In the Analysis Area		
Common Name	Occurrence Information	Determinations for Alternatives 2 and 3 <sup>1</sup>
<i>Calycadenia villosa</i>	Black Mountain (LPNF)	NI/BI
<i>Castilleja gleasonii</i>	Fish Creek (ANF)	NI/BI
<i>Castilleja lasiorhyncha</i>	Raywood Flat B (SBNF)	NI/BI
<i>Caulanthus simulans</i>	Barker Valley (CNF),	NI/BI
<i>Chorizanthe blakleyi</i>	Fox Mountain (LPNF), Spoor Canyon (LPNF)	NI/BI
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Coldwater (CNF)	NI/BI
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> <sup>3</sup>	Barker Valley (CNF)	NI/BI <sup>3</sup>
<i>Chorizanthe rectispina</i>	Black Mountain (LPNF)	NI/BI
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> <sup>2</sup>	Cactus Springs B (SBNF)	NI/BI <sup>2</sup>
<i>Clarkia delicata</i> <sup>3</sup>	Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, Upper San Diego River (CNF)	NI/BI <sup>3</sup>
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	Sill Hill (CNF)	NI/BI
<i>Delphinium umbraulorum</i>	Diablo (LPNF), Fox Mountain (LPNF), Garcia Mountain (LPNF), Machesna Mountain (LPNF), Sespe – Frazier (LPNF), Spoor Canyon (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI
<i>Dieteria canescens</i> var. <i>ziegleri</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Draba corrugata</i> var. <i>saxosa</i>	Cactus Springs B (SBNF)	NI/BI
<i>Dudleya viscida</i>	Trabuco (CNF)	NI/BI
<i>Eriastrum luteum</i>	Black Mountain (LPNF)	NI/BI
<i>Eriophyllum lanatum</i> var. <i>hallii</i>	Fox Mountain (LPNF)	NI/BI
<i>Fritillaria ojaiensis</i>	Sespe – Frazier (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	Cactus Springs B (SBNF)	NI/BI
<i>Gilia leptantha</i> ssp. <i>leptantha</i>	Raywood Flat B (SBNF)	NI/BI
<i>Hesperocyparis stephensonii</i>	Sill Hill (CNF), Upper San Diego River (CNF)	NI/BI
<i>Heuchera hirsutissima</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Heuchera parishi</i>	Raywood Flat B (SBNF)	NI/BI
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	Trabuco (CNF)	NI/BI
<i>Horkelia truncata</i>	Ladd (CNF)	NI/BI
<i>Imperata brevifolia</i>	Antimony (LPNF), Dry Lakes (LPNF), West Fork (ANF), Westfork (ANF)	NI/BI
<i>Layia heterotricha</i>	Antimony (LPNF), Fox Mountain (LPNF), Quatal (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Lepechinia cardiophylla</i>	Coldwater (CNF), Ladd (CNF), Trabuco (CNF)	NI/BI
<i>Lepechinia fragrans</i>	West Fork (ANF), Westfork (ANF)	NI/BI
<i>Lepechinia rossii</i> <sup>2</sup>	Red Mountain, Tule (ANF)	NI/BI <sup>2</sup>
<i>Lilium parryi</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF), Raywood Flat B (SBNF), West Fork (ANF),	NI/BI
<i>Limnanthes alba</i> var. <i>parishi</i>	Barker Valley (CNF)	NI/BI



Table 15. Summary of Effects Determinations for Sensitive Species In the Analysis Area		
Common Name	Occurrence Information	Determinations for Alternatives 2 and 3 <sup>1</sup>
<i>Linanthus orcutti</i>	Caliente (CNF)	NI/BI
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Mudulce (LPNF)	NI/BI
<i>Monardella australis</i> ssp. <i>jokerstii</i> <sup>2</sup>	Cucamonga B (SBNF)	NI/BI <sup>2</sup>
<i>Monardella linoides</i> ssp. <i>oblonga</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Barker Valley (CNF), Caliente (CNF), Coldwater (CNF)	NI/BI
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	Barker Valley (CNF)	NI/BI
<i>Navarretia peninsularis</i>	Sawmill – Badlands (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Nolina cismontana</i>	Trabuco (CNF)	NI/BI
<i>Opuntia basilaris</i> ssp. <i>brachyclada</i>	Fish Canyon (ANF), Red Mountain (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI
<i>Parnassia cirrata</i> var. <i>cirrata</i>	Raywood Flat B (SBNF)	NI/BI
<i>Penstemon californicus</i>	Pyramid Peak A (SBNF)	NI/BI
<i>Phacelia excilis</i> <sup>3</sup>	Sespe – Frazier (LPNF)	NI/BI <sup>3</sup>
<i>Phacelia keckii</i>	Coldwater (CNF), Ladd (CNF), Trabuco (CNF)	NI/BI
<i>Saltugilia latimeri</i>	Cactus Springs B (SBNF)	NI/BI
<i>Satureja chandleri</i>	Trabuco (CNF)	NI/BI
<i>Sedum niveum</i>	Cactus Springs B (SBNF)	NI/BI
<i>Sidalcea hickmanii</i> ssp. <i>parishi</i>	Fox Mountain (LPNF), Machesna Mountain (LPNF), Spoor Canyon (LPNF), Raywood Flat B (SBNF)	NI/BI
<i>Sidothea emarginata</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Streptanthus bernardinus</i> <sup>3</sup>	Cucamonga B (SBNF)	NI/BI <sup>3</sup>
<i>Streptanthus campestris</i>	White Ledge (LPNF), Cactus Springs B (SBNF)	NI/BI
<i>Tetracoccus dioicus</i>	Trabuco (CNF)	NI/BI
<i>Thermopsis californica</i> var. <i>semota</i>	Sill Hill (CNF), Upper San Diego River (CNF), Tequepis (LPNF)	NI/BI
<sup>1</sup> Determination Codes: MAI = May affect individuals but not likely to lead to a trend to Federal listing for Sensitive species. NI/BI=No impact and potentially beneficial impacts <sup>2</sup> Species that has been proposed for addition to the Regional Forester’s Sensitive species list in 2012. Being treated as a Sensitive species in this evaluation. <sup>3</sup> Currently a Sensitive species but being proposed for removal from the Sensitive species list.		

## **PART IV: BIOLOGICAL ASSESSMENT OF IMPACTS TO THREATENED, ENDANGERED, PROPOSED, AND CANDIDATE SPECIES**

### **IV-1.0 - INTRODUCTION**

This Biological Assessment (BA) part of this document addresses proposed and listed Threatened, Endangered (T/E) species and their proposed and designated Critical Habitat. Under agreement with USFWS, the Forest Service only addresses Candidate species in programmatic consultations.

### **IV-2.0 - CONSULTATIONS AND CONFERENCES TO DATE**

The Endangered Species Act (ESA) requires that federal agencies evaluate effects to federally-listed species and Critical Habitat in consultation with USFWS when proposing federal actions. There are several programmatic and project-specific consultations that have included the two T/E plants evaluated in this BA.

#### Programmatic Consultation on LMP in 2000/2001

In 2000, the SBNF and the other National Forests in the Southern Province prepared a Programmatic BA for the existing LMPs at the time (USDA Forest Service 2000). USFWS issued a Biological Opinion (1-6-00-F-773.2) in 2001 (USFWS 2001).

#### Hazardous Fuels Management Programmatic Consultation 2004/2005

In 2004, the SBNF initiated consultation on the SBNF's fuels reduction and vegetation management programs (USDA Forest Service 2004). A USFWS letter dated August 29, 2005 (FWS-SB/WRIV-3468.2) included concurrence of the "not likely to adversely affect" determinations (by using the Proposed Action's Design Features) for several species.

The formal consultation for this programmatic BA was withdrawn due to a change in strategies; no BO was written for the species with "may adversely affect" determinations and no "incidental take" statement was issued to the SBNF.

#### Programmatic Consultation on LMP in 2005

In 2005, the SBNF and other the three Southern Province National Forests initiated consultation on the updated LMP (Biological Assessment for the Revised Land Management Plans, dated March 18, 2005) (USDA Forest Service 2005). A BO was issued Sept. 15, 2005 (1-6-05-F733.9 – Biological and Conference Opinions on the Revised Land and Resource Management Plans for the Four Southern California National Forests, California) (USFWS 2005).

That consultation did not cover site-specific ongoing effects from National Forest management activities. As such, the southern California National Forests have scheduled preparation of Biological Assessments for consultations to address ongoing effects. Those consultations are discussed below. Consultation was re-initiated August 5, 2008 for Critical Habitat and new species designated after the 2006 ROD for the LMP.

#### Ongoing Effects - T/E Plant Consultations on the LPNF

*LPNF*: The LPNF has completed a Biological Assessment for the effects to *Chlorogalum purpureum* var. *reductum* from ongoing Forest Service management activities/programs. Section 7 Consultation with USFWS was initiated in late fall 2012.

#### Ongoing Effects - T/E Plant Consultations on the SBNF

Four listed meadow plant species, including *Poa atropurpurea*, were included in Province Programmatic BA (USDA Forest Service 2000) and Biological Opinion in 2001 (USFWS 2001). An updated Biological Assessment has been prepared to assess effects to twelve mountaintop T/E plants, including *Poa atropurpurea*, as a result of ongoing forest management activities. Formal Consultation was initiated December 11, 2012 (USDA Forest Service 2012).

#### Project-Specific Consultations

In some cases, Formal or Informal Consultations have occurred on projects that occurred in areas where T/E plants and/or Critical Habitat occur. These are listed below for T/E plants that occur in the IRAs addressed in this analysis.

*SBNF*: The SBNF is in the process of conducting Formal Consultation on three fuels reduction projects that have occurrences and/or Critical Habitat for *Poa atropurpurea*. Three Biological Assessments were prepared and submitted to USFWS in a “batched” consultation package on June 25, 2012. A Biological Opinion has yet to be received.

### **IV-3.0 - BASELINE CONDITIONS AND POTENTIAL EFFECTS FOR T/E SPECIES**

Part I of this document contains descriptions of the methods/evaluation process, the Proposed Action, and habitat in the project area. Part II includes general effects discussions that may also be applicable to T/E species. Existing environment conditions in the IRAs are described in Part II-2.0.

Detailed species accounts for all of the T/E species are contained in **Appendix C**.

The following discussions focus on T/E species known to occur in the project area, those that are known to occur in one or more of the IRAs. This is based on Forest Service database records.

See Part II-3.1 for a discussion about present and foreseeable future projects that are considered in the Cumulative Effects discussions for each species. The Cumulative Effects discussions below include two definitions:

- Under the NEPA, “cumulative impacts” are those impacts caused by past, present, and future federal, state, and private activities within or to special status species and their habitats.
- Under the ESA, “cumulative effects” only consider future non-federal activities that are reasonably certain to occur. Future federal activities or activities permitted by federal agencies are not included under ESA “cumulative effects” because any proposed future federal activities or federally permitted activities must undergo Section 7 consultation with the USFWS.

The Action Area for this analysis is the footprint of the IRAs.

#### **IV-3.1 – Occurrences of Threatened/Endangered Species and Critical Habitat**

All T/E plant species and Critical Habitat in **Table 16** were considered in this evaluation. Most of the IRAs have not been completely surveyed for botanical resources. It is possible that undetected occurrences of T/E plants occur in the IRAs, especially for those species shown as having a potential to occur on one of the National Forests in **Table 16**. Out of twenty-nine federally-listed plants that occur on southern California National Forests, only two species, *Poa atropurpurea* and *Chlorogalum purpureum* var. *reductum*, are known to occur or have designated Critical Habitat in the IRAs.

Detailed species accounts for these two species are contained in **Appendix C**; they are summarized below. References and citations are contained in the full species accounts but generally not in the summaries.

#### **IV-3.2 – Potential Effects to Threatened/Endangered Species and Critical Habitat**

##### **IV-3.2.1 – Effects from LUZ Alternatives**

##### **IV-3.2.1.1 – *Poa atropurpurea* (San Bernardino bluegrass)**

*Species Information:* *Poa atropurpurea* is federally-listed as Endangered in 1998 (63 Federal Register 49006-49022). Critical Habitat was designated in 2008 (73 Federal Register 47706 47767). A Recovery Plan has not been finalized.

*Poa atropurpurea* is restricted to the San Bernardino Mountains in San Bernardino County and in the Laguna and Palomar Mountains in San Diego County. Across its range, of the 19 meadow areas historically and or currently occupied, 10 are known to be currently occupied (USFWS 2008a), including occurrences on the CNF and SBNF. There is designated Critical Habitat on the CNF and SBNF.

*Poa atropurpurea* is a monocotyledon in the grass family (Poaceae). *Poa atropurpurea* is a dioecious rhizomatous perennial grass that flowers between April–June. *Poa atropurpurea* occurs in montane meadows and seeps at elevations of 4,400–8,000 feet (1,360–2,455 m). The species is usually found on the edges of wet meadows in open pine forests and grassy slopes on loamy alluvial to sandy loam soils. *Poa atropurpurea* tends to occupy somewhat open areas on clay soils with less competition from more mesic species, such as *Poa pratensis*, *Carex* spp., and *Juncus* spp. These areas are often adjacent to wetter *Carex*/forb vegetation series and *Artemisia tridentata* or *Pinus jeffreyi*. Within meadows, *Poa atropurpurea* may prefer small rocky microhabitats.

**Table 16. Threatened And Endangered Plant Species And Designated Critical Habitat by National Forest**

Scientific Name	Common Name	Status	Location				Critical Habitat	Occurrence in IRAs
			ANF	CNF	LPNF	SBNF		
<i>Acanthomintha ilicifolia</i>	San Diego thornmint	T		K			CNF	N
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Cushenberry oxytheca	E				K	SBNF	N
<i>Allium munzii</i>	Munz's onion	E		K			CNF (+Proposed CH)	N
<i>Arenaria paludicola</i>	marsh sandwort	E				P	Not on NFS	N
<i>Astragalus albens</i>	cushenbury milkvetch	E				K	SBNF	N
<i>Astragalus brauntonii</i>	Braunton's milkvetch	E	K	K		P	Designated	N
<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Coachella milkvetch	E				P	Not on NFS	N
<i>Astragalus tricarlinatus</i>	triplerib milkvetch	E				K	Not on NFS	N
<i>Baccharis vanessae</i>	Encinitas falsewillow	T		K			None	N
<i>Berberis nevinskii</i>	Nevin's barberry	E	K	K		P	CNF	N
<i>Brodiaea filifolia</i>	threadleaf clusterlily	T	K	K		P	CNF; ANF	N
<i>Castilleja cinerea</i>	ashgray paintbrush	T				K	SBNF	N
<i>Ceanothus ophiocylus</i>	Vail Lake ceanothus; buckthorn	T		K			CNF	N
<i>Chlorogalum purpureum</i> var. <i>reductum</i>	Camatta Canyon amole	T			K		LPNF	N; CH
<i>Cirsium fontinale</i> var. <i>obispoense</i>	Chorro Creek bog thistle	E			P		None	N
<i>Dodecahema leptoceras</i>	slender-horned spineflower	E	K	K		K	None	N
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	canyon liveforever	T		K			None	N
<i>Eremalche kernensis</i>	Kern mallow	E			P		None	N
<i>Eremogone ursina</i> (formerly <i>Arenaria</i> )	Bear Valley sandwort	T				K	SBNF	N
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana woollystar	E				P	None	N
<i>Erigeron parishii</i>	Parish's fleabane	T				K	SBNF	N
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	southern mountain buckwheat	T			P	K	SBNF	N

Table 16. Threatened And Endangered Plant Species And Designated Critical Habitat by National Forest								
Scientific Name	Common Name	Status	Location				Critical Habitat	Occurrence in IRAs
			ANF	CNF	LPNF	SBNF		
<i>Eriogonum ovalifolium</i> ssp. <i>vineum</i>	Cushenbury buckwheat	E				K	SBNF	N
<i>Nasturtium gambelii</i> (formerly <i>Rorippa</i> )	Gambel's water cress	E				P	None	N
<i>Physaria kingii</i> ssp. <i>bernardina</i>	San Bernardino Mountains bladderpod	E				K	SBNF	N
<i>Poa atropurpurea</i>	San Bernardino bluegrass	E		K		K	CNF, SBNF	K, CH
<i>Sidalcea pedata</i>	bird-footed checkerbloom	E				K	None	N
<i>Taraxacum californicum</i>	California dandelion	E				K	SBNF	N
<i>Thelypodium stenopetalum</i>	Slender petal thelypody	E				K	None	N
<u>Status</u> E=Endangered T=Threatened	<u>Occurrence</u> K=Known to occur on USFS lands P=Potential to occur on USFS lands N=Not expected to occur due to lack of suitable habitat conditions (e.g., soil types, etc.), distance from known occurrences, or lack of detections during surveys. U=Unlikely to occur due to lack of suitable habitat conditions even though there are nearby occurrences. CH=designated Critical Habitat occurs					<u>Location</u> ANF=Angeles National Forest CNF=Cleveland National Forest LPNF=Los Padres National Forest SBNF=San Bernardino National Forest		

*Occurrences in IRAs:* There are 2.63 acres of *Poa atropurpurea* occupied habitat in the Barker Valley IRA on the CNF (**Appendix B-Map Packet; Table 17**).

*Critical Habitat:* There are 160 acres of *Poa atropurpurea* Critical Habitat in the Barker Valley IRA (**Table 17**).

The Primary Constituent Elements (PCEs) for *Poa atropurpurea* are:

- 1) wet meadows subject to flooding during wet years in the San Bernardino Mountains in San Bernardino County at elevations of 6,700-8,10 feet, and in the Laguna and Palomar Mountains of San Diego County at elevations of 6,000-7,500 feet that provide space for individual and population growth, reproduction and dispersal, and;
- 2) well-drained loamy alluvial to sandy loam soils occurring in the wet meadow system with a 0-16 percent slope, to provide water, air, minerals, and other nutritional or physiological requirements to the species.

*Potential Effects:* The potential effects discussion in section II-3.2 is applicable to any T/E plants and Critical Habitat that are known to occur or may occur in the affected IRAs. For Alternative 1 (No Action), the viability assessments and effects discussions for this species would not change from those made in the supporting biological documents for the selected alternative in the 2006 FEIS. The supporting documents in that Project Record are incorporated here by reference.

<b>Table 17. Acres of <i>Poa atropurpurea</i> Habitat in the Barker Valley IRA (Cleveland National Forest)</b>						
<b>Land Use Zone</b>	<b>Alternative 1 (No Action)</b>		<b>Alternative 2 (Proposed Action)</b>		<b>Alternative 3 (RW Emphasis)</b>	
	<b>Occupied Habitat</b>	<b>Critical Habitat</b>	<b>Occupied Habitat</b>	<b>Critical Habitat</b>	<b>Occupied Habitat</b>	<b>Critical Habitat</b>
<b>BCMUR</b>	2.63	145	0	16	0	16
<b>RW</b>	0	0	2.63	0	2.63	0
<b>BCNM</b>	0	15	0	144	0	144
<b>Total</b>	<b>2.63</b>	<b>160</b>	<b>2.63</b>	<b>160</b>	<b>2.63</b>	<b>160</b>

In Alternative 1, 2.63 acres of mapped occurrences would remain the same (BCMUR). Under Alternatives 2 and 3, the mapped occurrences would be managed as RW with continued road access subject to the terms of the permit (**Table 17**). Overall, the long-term management under Alternatives 2 and 3 may be expected to provide a beneficial effect to this species.

In Alternative 1, the 145 acres of designated Critical Habitat in BCMUR and 15 acres in BCNM would remain the same. In Alternatives 2 and 3, only 16 acres would remain in BCMUR and the remaining 144 acres would change to BCNM (**Table 17**).

If effects are occurring to *Poa atropurpurea* plants and/or the PCEs of the designated Critical Habitat, they may be reduced under Alternatives 2 and 3 because of the reduction of suitable uses. Over the long-term, management under Alternatives 2 and 3 may provide a beneficial effect to *Poa atropurpurea* Critical Habitat.

A recovery plan and conservation strategy for *Poa atropurpurea* is not yet available. Any activities proposed under a future recovery plan would be allowed under all alternatives.

Special management considerations for protection of the physical and biological features related to geographically specific threats are defined within each Critical Habitat management unit. For the Mendenhall Unit, Special Management Considerations-Mendenhall Unit 13 (within Barker IRA) may be required to: restore, protect and maintain essential features due to threats from grazing and invasive, nonnative plant species. The special management considerations could be implemented under all alternatives.

#### IV-3.2.1.2 – *Chlorogalum purpureum* var. *reductum* (Camatta Canyon amole)

*Species Information:* This species was listed as Threatened in 2000 (65 FR 14878-14888, 2000) and Critical Habitat was designated on October 24, 2002 (67FR 65413). A Recovery Plan for *Chlorogalum purpureum* var. *reductum* is not yet available.

*Chlorogalum purpureum* var. *reductum* is a narrowly-distributed endemic that occurs on the northeast side of the La Panza Range in San Luis Obispo County. It is known from one population within a small geographic area. Plants occur in two discrete locations. The larger site is adjacent to State Highway 58, a two-lane road. A smaller site occurs approximately 3 miles (4.8 kilometers) to the south. Most of the population is believed to occur on the LPNF; however, lack of surveys on non-NFS lands make it impossible to quantify. The LPNF occurrence is known to extend onto the adjacent right-of-way of State Highway 58 managed by the California Department of Transportation and onto nearby private properties.

*Chlorogalum purpureum* var. *reductum* is a monocot in the century plant family (Agavaceae). *Chlorogalum purpureum* var. *reductum* (Camatta Canyon amole) is a perennial lily that is smaller in size than its look-a-like *Chlorogalum purpureum* var. *purpureum* (purple amole). Both are federally Threatened species. *Chlorogalum purpureum* var. *reductum* is much more restricted and is estimated to only occupy 127 acres (USFWS 2008c), 41 which occur on the LPNF (USDA Forest Service 2005).

*Chlorogalum purpureum* var. *reductum* occurs in grassland, oak woodland, and oak savannah at elevations of 1,000-2,050 feet (305-625 meters) in the South Coast Ranges. Like other members of the lily family, *Chlorogalum purpureum* var. *reductum* probably develops root-hyphae relationships with a fungus. These mycorrhizal relationships can aid in nutrient and water uptake by the host plant and can alter growth and competitive interactions between species.

At both known locations of *Chlorogalum purpureum* var. *reductum*, the plants grow in variously sized patches and are not uniformly distributed throughout the habitat, which is described as sparsely vegetated annual grasslands surrounded by blue oak (*Quercus douglasii*) woodland and gray/foothill pines (*Pinus sabiniana*).

*Chlorogalum purpureum* var. *reductum* grows on well-drained red clay soils with substantial amounts of pebbles and gravels and a high (8:1) calcium to magnesium ratio. Despite reports to the contrary, the substrate in this area is not serpentine. The taxon appears to be restricted to areas with rocky, nutrient-poor soils that tend to prevent herbivory by pocket gophers. In areas with better soils, nonnative annuals (*e.g.*, *Bromus madritensis* ssp. *rubens*, *Erodium*



spp., *Schismus barbatus*, *Avena barbata*) appear to be outcompeting *Chlorogalum purpureum* var. *reductum* for space, light, nutrients, and water. This species may be associated with cryptobiotic [*i.e.*, cryptogamic] crusts (USFWS 2008c).

*Occurrences in IRAs:* There are no known occurrences of *C. p. var. reductum* within any of the affected IRAs. However, there is an occurrence approximately 800 feet east of the Black Mountain IRA boundary (USFS GIS map 8/31/2012 located in the DEIS Project Record).

*Critical Habitat:* There are 4,378 acres of critical habitat for *C. purpureum* var. *purpureum* with 1,087 acres (~25%) occurring on NFS lands (Forest Service GIS). There are 82 acres of *Chlorogalum purpureum* var. *reductum* Critical Habitat in the Black Mountain IRA. There are two private inholding areas of Critical Habitat within the LPNF boundary.

The primary constituent elements (PCEs) of Critical Habitat for *Chlorogalum purpureum* var. *reductum* consist of:

- well-drained, red clay soils with a large component of gravel and pebbles on the upper soil surface; and
- plant communities in functioning ecosystems that support associated plant and animal species (*i.e.*, pollinators, predator-prey species, etc.), including grassland (most similar to the California annual grassland series in Sawyer and Keeler-Wolf (1995) or the pine bluegrass grassland, non-native grassland and wildflower field descriptions in Holland (1986), blue oak woodland or oak savannah (Holland 1986), oak woodland, and open areas within shrubland communities (most similar to the Chamise series in Sawyer and Keeler-Wolf [1995]), although present cover of chamise at known areas of *C. p. var. reductum* unknown). Within these vegetation communities *C. p. var. reductum* appears where there is little cover of other species which compete for resources available for growth.

At least one of the primary constituent elements must be present in order for an area to be considered Critical Habitat.

*Potential Effects:* The potential effects discussion in section II-3.2 is applicable to any T/E plants and Critical Habitat that are known to occur or may occur in the affected IRAs. For Alternative 1 (No Action), the viability assessment and effects discussions for this species would not change from those made in the supporting biological documents for the selected alternative in the 2006 FEIS. The supporting documents in that Project Record are incorporated here by reference.

Because this species is not known or expected to occur in any of the affected IRAs, no effects to occurrences would be expected from any of the three alternatives. A change in LUZ from BC (Alternative 2) to BCNM or RW (Alternative 3) in the Black Mountain IRA adjacent to the nearest occurrence may result in some beneficial effects to those occurrences outside the IRA.

The proposed alternatives would result in changes within designated Critical Habitat for this species. There are 82 acres of Critical Habitat for this species within the 16,814 acre Black Mountain IRA. **Table 18** displays the changes in LUZ to acres of Critical Habitat in the Black Mountain IRA for each alternative.

<b>Table 18. Acres of <i>Chlorogalum purpureum</i> var. <i>reductum</i> Habitat in the Black Mountain IRA</b>						
<b>Land Use Zone</b>	<b>Alternative 1 (No Action)</b>		<b>Alternative 2 (Proposed Action)</b>		<b>Alternative 3 (RW Emphasis)</b>	
	<b>Occupied Habitat</b>	<b>Critical Habitat</b>	<b>Occupied Habitat</b>	<b>Critical Habitat</b>	<b>Occupied Habitat</b>	<b>Critical Habitat</b>
<b>BC</b>	0	67	0	1	0	1
<b>BCNM</b>	0	15	0	81	0	0
<b>RW</b>	0	0	0	0	0	81
<b>Total</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>82</b>

Under Alternative 1, there would be no changes to activities and LUZs (67 acres BC, 15 acres BCNM) in the Critical Habitat. Under Alternative 2, only 1 acre would remain in BC and the remainder (81 acres) would be zoned BCNM. Under Alternative 3, the BCNM acres would become RW.

If effects are occurring to the PCEs, Alternative 2 may provide a beneficial effect as acres shift from BC to BCNM because of a reduction of suitable uses within the Critical Habitat. Alternative 3 may further reduce effects because a greater number of suitable uses would be precluded under RW.

When the Critical Habitat was designated, special management considerations were identified for the PCEs:

- 1) Soils should be maintained by limiting or restricting the use of herbicides, fertilizers or other soil amendments, and by minimizing or avoiding activities that result in soil compaction (off road vehicles and trampling by people and livestock that would alter the hydrology);
- 2) Soil surface shall be maintained to enhance cryptogamic crust formation including avoidance of annual intense fires and activities defined in 1 above;
- 3) Associated plant and animal communities should be maintained to ensure the habitat needs of pollinators and seed dispersal agents are maintained and predator and prey relationships are functioning. Use of pesticides should be restricted so that viable populations of pollinators are present to facilitate reproduction of *C. p. var. reductum*. Fragmentation of habitat through road construction, development, and certain types of fencing should be limited. Predator prey relationships should be maintained and not affected by fencing that could exclude predator species;
- 4) Invasive nonnative species need to be actively managed and controlled to maintain the open habitat that *C. p. var. reductum* needs;
- 5) Certain areas may need to be temporarily fenced to protect from accidental or intentional trampling by humans, livestock or off route use;
- 6) Management of off route vehicle use, limiting or avoiding new structures and permanent roads and trails, managing tracked and wheeled vehicle use during growing seasons and managing foot traffic during growing and dormant seasons; and
- 7) Monitoring programs should be developed.

These special management considerations could be implemented under all alternatives. In Alternatives 2 and 3, managing the area as BCNM and RW respectively, may promote use of

four of the seven recommended special management considerations to maintain primary constituent elements (1, 2, 3 and 6 above).

Any activities proposed under future recovery plans would be allowed under all alternatives.

#### IV-3.2.2 – Effects of Monitoring Alternatives

See **Section II-3.3** for a discussion of potential effects from the monitoring and evaluation alternatives included in the project. That discussion applies here for T/E species and Critical Habitat PCEs.

#### IV-3.2.3 - Summary of Effects for T/E Species

**Table 19** summarizes the potential effects to *Poa atropurpurea* and *Chlorogalum purpureum* var. *reductum* for each alternative.

Table 19. Summary of Effects Of Each Alternative On T/E Plant Species And Critical Habitat				
Effect	Indicator	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
<b>Effects To Federally Listed Plant Species (TEPC) (Including Beneficial Effects) - <i>Poa atropurpurea</i></b>	Change in occupied <i>Poa</i> habitat acres into more restrictive land use zones	No change from existing environment. BCMUR = 2.63 acres of occupied habitat	More than Alternative 1. RW = 2.63 acres of occupied habitat	Same as Alternative 2
	Relative effects to <i>Poa atropurpurea</i>	No change from existing environment	Less impact than Alternative 1 due to less intensive development and limited motorized access/ mechanized use.	Same as Alternative 2
	Ability to maintain, enhance or treat habitat based on conservation recommendations in the CNF 1991 <i>Poa atropurpurea</i> Species Management Guide	Can maintain, enhance and treat	Same as Alternative 1	Same as Alternative 1
	Recovery Plan actions/activities	N/A (No Recovery Plan)	N/A (No Recovery Plan)	N/A (No Recovery Plan)
<b>Effects to Critical Habitat (including beneficial effects) - <i>Poa atropurpurea</i> &amp; <i>Chlorogalum purpureum</i> var. <i>reductum</i></b>	<b><i>Poa atropurpurea</i></b>			
	Location of CH acres by LUZ	No change from existing environment. BCMUR = 145 acres; BCNM = 15 acres	Less BCMUR and more BCNM than Alternative 1. BCMUR = 16 acres, BCNM = 144 acres	Same as Alternative 2
	Primary Constituent Elements	No change from existing environment	Same as Alternative 1	Same as Alternative 1
	Special Management Considerations Mendenhall Unit 13 (within Barker IRA) may	Can restore, protect and maintain essential features	Can restore, protect and maintain essential features	Can restore, protect and maintain essential features

Table 19. Summary of Effects Of Each Alternative On T/E Plant Species And Critical Habitat				
Effect	Indicator	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)
	be required to: restore, protect and maintain essential features due to threats from grazing and invasive, nonnative plant species.			
	<b><i>Chlorogalum purpureum</i> var. <i>reductum</i></b>			
	Location of CH acres by LUZ	No change from existing environment. BC (67) acres, BCNM (15) acres	Less acres in BC (1), more acres in BCNM (81) than Alternative 1	Same as Alternative 2 for BC; most acres in RW (81)
	Primary Constituent Elements	No change from existing environment	Same as Alternative 1	Same as Alternative 1
	Special Management Considerations (see list in text)	Can restore, protect and maintain essential features	Same as Alternative 1	Same as Alternative 1
	<b>Both Species</b>			
	Total acres of Critical Habitat	No change from existing environment	Same as Alternative 1	Same as Alternative 1

#### **IV-4.0 - DETERMINATION OF EFFECTS FOR T/E SPECIES**

**Table 19** summarizes the determinations of effects for federally-listed plants and Critical Habitat covered under this analysis.

##### **Threatened Or Endangered Plant Species And Designated Critical Habitat:**

**Alternative 1 (No Action):** For Alternative 1 (No Action), the determinations of effects would not change from those made in the supporting biological documents for the selected alternative in the 2006 FEIS. The supporting documents in that Project Record are incorporated here by reference. The “determinations of effects” from the 2006 LMP were: may affect and is likely to adversely affect *Chlorogalum purpureum* var. *reductum* and *Poa atropurpurea* and may affect and is likely to adversely affect some Critical Habitat for *Chlorogalum purpureum* var. *reductum*. Consultation was re-initiated in 2008 when Critical Habitat was designated. The determination was “may affect and is likely to adversely affect some Critical Habitat for *Poa atropurpurea*.”

**Alternative 2 (Proposed Action):** It is my determination that implementation of Alternative 2 may affect but is not likely to adversely affect *Poa atropurpurea* or *Chlorogalum purpureum* var. *reductum* or their designated Critical Habitats. The long-term effects of the Proposed Action may be beneficial to these two plant species. Alternative 2 would not affect any other Threatened or Endangered species in **Table 16**.

**Alternative 3 (Recommended Wilderness Emphasis):** It is my determination that implementation of Alternative 3 may affect but is not likely to adversely affect *Poa atropurpurea* or *Chlorogalum purpureum* var. *reductum* or their designated Critical Habitats. The long-term effects of the Proposed Action may be beneficial to these two plant species. Alternative 3 would not affect any other Threatened or Endangered species in **Table 16**.

**Alternatives A, B, C for Monitoring and Evaluation:** It is my determination that changing the monitoring methodology, in itself, is not expected to result in effects to Threatened, Endangered, plants or their Critical Habitat.

**Species Proposed for Federal Listing or Proposed Critical Habitat:** There is no proposed Critical Habitat in the affected IRAs, and no plants proposed for listing under the Endangered Species Act occur in or near the IRAs.

**Consultation Requirements:** Informal Consultation will be conducted with USFWS due to the “may affect, not likely to adversely affect” determinations. Based on the proposed action and analysis of effects, Section 7 Formal Consultation is not required.

**Table 20. Summary of Determinations of Effects for Threatened and Endangered Species**

Scientific Name	Common Name	Determination of Effects – Alternatives 2 and 3
<i>Acanthomintha ilicifolia</i>	San Diego thornmint	NE
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Cushenberry oxytheca	NE
<i>Allium munzii</i>	Munz's onion	NE
<i>Arenaria paludicola</i>	marsh sandwort	NE
<i>Astragalus albens</i>	cushenbury milkvetch	NE
<i>Astragalus brauntonii</i>	Braunton's milkvetch	NE
<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Coachella milkvetch	NE
<i>Astragalus tricarlinatus</i>	triplerib milkvetch	NE
<i>Baccharis vanessae</i>	Encinitas falsewillow	NE
<i>Berberis nevinii</i>	Nevin's barberry	NE
<i>Brodiaea filifolia</i>	threadleaf clusterlily	NE
<i>Castilleja cinerea</i>	ashgray paintbrush	NE
<i>Ceanothus ophiocylus</i>	Buckthorn	NE
<i>Chlorogalum purpureum</i> var. <i>reductum</i>	Camatta Canyon amole	NE for species; NLAA for CH
<i>Cirsium fontinale</i> var. <i>obispoense</i>	Chorro Creek bog thistle	NE
<i>Dodecahema leptoceras</i>	slender-horned spineflower	NE
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	canyon liveforever	NE
<i>Eremalche kernensis</i>	Kern mallow	NE
<i>Eremogone ursina</i> (formerly <i>Arenaria</i> )	Bear Valley sandwort	NE
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana woollystar	NE
<i>Erigeron parishii</i>	Parish's fleabane	NE
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	southern mountain buckwheat	NE
<i>Eriogonum ovalifolium</i> ssp. <i>vineum</i>	Cushenbury buckwheat	NE
<i>Nasturtium gambelii</i> (formerly <i>Rorippa</i> )	Gambel's water cress	NE
<i>Physaria kingii</i> ssp. <i>bernardina</i>	San Bernardino Mountains bladderpod	NE
<i>Poa atropurpurea</i>	San Bernardino bluegrass	NLAA for species; NLAA for CH
<i>Sidalcea pedata</i>	bird-footed checkerbloom	NE
<i>Taraxacum californicum</i>	California dandelion	NE
<i>Thelypodium stenopetalum</i>	Slender petal thelypody	NE
NE=No Effect NLAA=Not Likely to Adversely Affect MAA=May Adversely Affect		

## **PART V: NON-NATIVE SPECIES RISK ASSESSMENT**

### **VI-1.0 – INTRODUCTION**

See Part I of for a description of the Proposed Action. The following evaluation addresses the risk on introduction, establishment, and spread of non-native plants (including California Department of Food and Agriculture (CDFA) listed noxious weeds and other invasive non-native plant species) and animals and recommends measures to offset these risks.

Forest Service Manual direction for Invasive Species Management is contained in a new manual section, FSM 2900, effective December 5, 2011. This direction sets forth National Forest System policy, responsibilities, and direction for the prevention, detection, control, and restoration of effects from aquatic and terrestrial non-native and invasive species (including vertebrates, invertebrates, plants, and pathogens). More details about management direction for non-native species are included in **Appendix A**.

Invasive non-native species are organisms that are introduced into an area in which they did not evolve and in which they have few or no natural enemies to limit their reproduction and spread. All across the nation, non-native invasive plants, insects, fish, mollusks, crustaceans, pathogens, mammals, birds, reptiles, and amphibians and have infested hundreds of millions of acres of land and water. These organisms then prey upon, consume, harm and displace native species and their habitats. They are a major threat to native biodiversity, natural ecosystems and ecosystem services. They also threaten many species-at-risk on the National Forests.

Many invasive nonnative organisms are well established on the southern California National Forests and are difficult to control or eradicate. Some species are so widespread that they may always persist at some level. The potential for introduction of new invasive species and the spread of those that are currently present is a continuous threat. The movement of humans, motorized and mechanized vehicles, equipment, boats, livestock, wildlife, wind and water can spread seed, reproductive plant parts and also aquatic organisms. Many species are then spread through aquatic systems. Products used on the National Forests can provide sources of infestation.

The presence of urban communities within and adjacent to the National Forests and lands under special-use permit also contribute to the introduction and spread of invasive species. Invasive nonnative plants occur in higher densities along roadways; in areas disturbed by off-route vehicle use; livestock and fuel treatments; in campgrounds; along recreation trails and at trailheads; in utility corridors; and in aquatic habitats modified by dams and diversions.

Spread is more probable in ecosystems with high natural disturbance or where native ecosystems have already been affected by these species. Once habitats are invaded, eradication efforts are rarely successful and the effects are irreversible (USDA FS 2001 *Roadless Area FEIS*).

Restoration of ecosystem conditions to a more natural state and recovery of species-at-risk are often primary reasons for treating invasive nonnative species infestations. Habitat capability for native species is improved as nonnative species decrease in abundance and competition or predation is reduced. Managing for sustainable riparian and terrestrial habitats is an important component of invasive species management. Thus it is important to not only control invasive



species where they occur, but also to manage habitat to remain resilient to invasive species introduction and spread.

Within the 37 Inventoried Roadless Areas, introductions of some invasive nonnative organisms may have been limited compared to lands with higher designated and unauthorized road densities. This has likely resulted in the conservation of native communities and reduced effects to native species and their habitats. On the other hand, the location of some of the IRAs adjacent to the densely populated urban interface and other properties has contributed to the introduction of invasive nonnative species. All of the southern California forests are currently removing or planning to remove invasive species within some of the IRAs. Managing these lands to remain resilient is essential as future invasive species introductions continue.

For the IRA analysis, information on occurrences of invasive nonnative species contained in the tables was derived from the most accurate, readily available data at the time (August 2012). Geographical Information Systems (GIS) data were gathered from Forest Service's Natural Resource Manager – NRM-TESP. The quality and quantity of the GIS data entered into the NRM-TESP database at the time it was queried varied by Forest. To ensure all information sources were utilized the invasive plant and wildlife information in the 37 wilderness evaluations was also utilized for the invasive species effects analysis.

Specific non-native species information for each IRA can also be found in the 37 Wilderness Evaluations (Appendix 2 of the Draft SEIS). These documents have been updated with the most current information since their release for public scoping in May 2012. They describe the current conditions.

## **VI-2.0 - NON-NATIVE PLANT AND ANIMAL RISK ASSESSMENT**

### **VI-2.1 - Assumptions Used In The Analysis**

#### **Assumptions - USFS Management Direction**

The expected consequences for the management of non-native plant and animal species under each alternative expressed below rely on the assumption that management direction would be implemented consistently across the southern California National Forests under all alternatives and would generally be effective in mitigating impacts. It assumes the current direction would be included in all alternatives and USFS policy direction updated since the Plan revision would be also implemented. See **Appendix A** for applicable management direction.

#### **Assumptions - Effects Analysis Common to All Invasive Species**

- Invasive plant and animal species and their habitats occur across all vegetation types regardless of land use zone (LUZ).
- The types of activities that are permitted on National Forest system lands as a result of LMP land use zoning can have effects on the introduction, spread and management of non-native plant and animal species and their habitats.
- The four southern California National Forests are some of the most heavily visited in the National Forest system. It is expected that visitation will continue to grow as populations in southern California expand.

## **VI-2.2 – Occurrences of Non-Native Plant Species in the Project Area**

Table 463 in the FEIS for the LMPs on four southern California National Forests displays the nonnative plant species that occur or have potential to occur (USDA Forest Service 2006 - LMP FEIS Vol. 1, page 179). The table also displays the habitats they affect.

Specific non-native plant species information can also be found in the 37 Wilderness Evaluations that are attached as Appendix 2 of the SEIS. These documents have been updated with the most current information since their release for public scoping in May 2012. They describe the current (affected) environment (Alternative 1).

Although there are at least 99 non-native plant species that occur or have the potential to occur on one or more the southern California National Forests, not all of these occur within the 37 IRAs.

**Table 21** displays non-native plants known to occur in one or more of the 37 IRAs. All of these species were considered in this analysis. **Table 22** summarizes the Land Use Zones and acreages for each of the occurrences of non-native plants known in the IRAs.

Since focused surveys for non-native species have not been completed in the IRAs, it is likely that some undetected non-native plants occur in one or more of the IRAs. Therefore, the risk associated with unknown/undetected weeds is considered medium.

Some of the most difficult-to-eradicate plants that also have high levels of negative effects include giant reed grass, tamarisk, Spanish broom, and yellow star thistle. One or more of the National Forests has ongoing efforts to control or eradicate these species.

Giant reed grass (*Arundo donax*) displaces native species as it alters the hydrology by invading streams and riparian areas. Control of this weed before it increases in population size is important as it becomes more difficult once it has established. Arundo eradication is largely achieved by cutting with chainsaws and painting with an herbicide that can be used around water.

Tamarisk (*Tamarix ramosissima*) displaces native plants in riparian areas, alters habitat and food webs for animals, depletes water resources, can cause soil salinity, and increases fire potential. Tamarisk eradication is largely achieved by cutting with chainsaws and painting or spraying with a type of herbicide that can be used around water.

Spanish broom (*Spartium junceum*) rapidly colonizes disturbed habitats and establishes thick shrub communities that displace coastal sage scrub and chaparral communities. Shrubs can be removed manually with weed wrenches one plant at a time or cut and treated with herbicide to facilitate a more rapid removal.

Yellow star thistle (*Centaurea solstitialis*) forms thick impenetrable mats that displace native vegetation. They affect the health of native wildlife and are carried in animal's hair and fur and in people's clothing. They are also wind dispersed. Mowing, habitat restoration and spraying with herbicides are all methods to control this annual species.

### **VI-2.3 – Occurrences of Non-Native Animal Species in the Project Area**

Table 464 in the FEIS for the LMPs on four southern California National Forests displays the nonnative animal species that occur or have potential to occur (USDA Forest Service 2006 - LMP FEIS Vol. 1). The table also displays the habitats they affect.

Specific non-native animal species information can also be found in the 37 Wilderness Evaluations that are attached as Appendix 2 in the SEIS. These documents have been updated with the most current information since their release for public scoping in May 2012. They describe the current conditions (Alternative 1).

There are a number of non-native animals that occur or have the potential to occur on one or more the southern California National Forests, not all of these occur within the 37 IRAs.

**Table 23** displays non-native animals known to occur in one or more of the 37 IRAs. All of these species were considered in this analysis. Since focused surveys for non-native species have not been completed in the IRAs, it is likely that some undetected non-native plants occur in one or more of the IRAs. Therefore, the risk associated with unknown/undetected non-native animals is considered medium.

Some of the most difficult-to-eradicate animals that also have high levels of negative effects include bullfrogs, non-native fish, and feral pigs. One or more of the National Forests has ongoing efforts to control or eradicate these species, often in collaboration with the California Department of Fish and Game.

Feral Pig: Feral pigs (*Sus scrofa*) disrupt and damage native habitats and ecological processes as result of rooting and digging activities. They can disturb large areas of native vegetation in a short period of time. They also eat land tortoises, birds, endemic reptiles and macro-invertebrates. They also transmit diseases such as foot and mouth disease and Leptospirosis. Feral pigs are controlled by hunting and shooting and are sometimes taken by hunters for food.

American Bullfrog: American bullfrog (*Lithobates catesbeianus* formerly *Rana catesbeiana*) are predators of many native amphibians and fish (including some Endangered species). They have been linked to spread of the chytrid fungus that is responsible for declining amphibian populations. Bullfrog eradication is achieved largely by shooting, spearing, bow and arrow and nets and traps.

Non-Native Fish – Various Species: There are a number of non-native fish, including goldfish, carp, mosquitofish, that have become naturalized after being released in lakes, ponds, and springs on NFS lands. These species threaten native ecosystems by outcompeting or preying upon native amphibians, fish, and macro-invertebrates. They can also spread aquarium diseases to native fish.

Table 21. Invasive Non-Native Plants Known to Occur In Inventoried Roadless Areas			
Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Scientific Name	Treatments planned or occurring for the species <sup>3</sup>	Acres <sup>4</sup>
<b>Angeles National Forest</b>			
<b>Fish Canyon IRA</b>			
yellow star-thistle	<i>Centaurea solstitialis</i>		
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
totalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Annual grasses			
<b>Red Mountain</b>			
Spanish broom	<i>Spartium junceum</i>		0.41
yellow star-thistle	<i>Centaurea solstitialis</i>		
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
totalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Annual grasses			
<b>Sespe-Frazier (ANF Portion)</b>			
yellow star-thistle	<i>Centaurea solstitialis</i>		
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
totalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
tree of heaven	<i>Ailanthus altissima</i>		
sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Peppergrass	<i>Lepidium latifolium</i>		
annual grasses			
<b>Salt Creek</b>			
yellow star-thistle	<i>Centaurea solstitialis</i>	X	0.11
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
totalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
annual grasses			

<b>Table 21. Invasive Non-Native Plants Known to Occur In Inventoried Roadless Areas</b>			
<b>Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup></b>	<b>Scientific Name</b>	<b>Treatments planned or occurring for the species <sup>3</sup></b>	<b>Acres <sup>4</sup></b>
tree of heaven	<i>Ailanthus altissima</i>		
Peppergrass	<i>Lepidium latifolium</i>		
<b>Tule</b>			
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
totalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
annual grasses			
Peppergrass	<i>Lepidium latifolium</i>		
tree tobacco	<i>Nicotiana glauca</i>		
<b>West Fork</b>			
totalote, Maltese star-thistle	<i>Centaurea melitensis</i>		0.26
Spanish broom	<i>Spartium junceum</i>		2.35
sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
tree tobacco	<i>Nicotiana glauca</i>		
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
<b>Westfork</b>			
bull thistle	<i>Cirsium vulgare</i>		
Spanish broom	<i>Spartium junceum</i>		2.81
tree tobacco	<i>Nicotiana glauca</i>		0.06
Washington fan palm	<i>Washingtonia robusta</i>		
sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
<b>Cleveland National Forest</b>			
<b>Cedar Creek</b>			
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		4.61
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego New</b>			
Himalayan blackberry	<i>Rubus armeniacus</i>		0.28
totalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		

Table 21. Invasive Non-Native Plants Known to Occur In Inventoried Roadless Areas			
Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Scientific Name	Treatments planned or occurring for the species <sup>3</sup>	Acres <sup>4</sup>
Italian plumeless thistle	<i>Carduus pycnocephalus</i>		0.78
<b>Ladd</b>			
tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>	X	
<b>Upper San Diego</b>			
common St. John's wort	<i>Hypericum perforatum</i>		0.02
<b>Los Padres</b>			
<b>Cuyama</b>			
yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
spotted knapweed <sup>2</sup>	<i>Centaurea maculosa</i>		
tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>		
tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>Diablo</b>			
Yellow star-thistle	<i>Centaurea solstitialis</i>	X	0.45
tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>		
<b>Dry Lakes</b>			
tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		0.21
pineywoods dropseed	<i>Sporobolus junceus</i>		2.61
yellow star-thistle	<i>Centaurea solstitialis</i>		0.31
Spanish broom <sup>2</sup>	<i>Spartium junceum</i>		
fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>Fox Mountain</b>			
yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
Russian knapweed <sup>2</sup>	<i>Acroptilon repens</i>		
<b>Juncal</b>			

<b>Table 21. Invasive Non-Native Plants Known to Occur In Inventoried Roadless Areas</b>			
<b>Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup></b>	<b>Scientific Name</b>	<b>Treatments planned or occurring for the species <sup>3</sup></b>	<b>Acres <sup>4</sup></b>
yellow star-thistle	<i>Centaurea solstitialis</i>		13.82
giant reed	<i>Arundo donax</i>	X	
tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
<b>Machesna Mountain</b>			
Bromus species <sup>2</sup>	<i>Bromus</i> spp.		
yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
totalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
<b>Maldulce Buckhorn</b>			
tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>	X	
<b>Sespe- Frazier (unknown districts)</b>			
totalote, Maltese star-thistle	<i>Centaurea melitensis</i>		15.45
pineywoods dropseed	<i>Sporobolus junceus</i>		0.01
smallflower tamarisk	<i>Tamarix parviflora</i>		2.09
Fennel	<i>Foeniculum vulgare</i>		1.06
yellow star-thistle	<i>Centaurea solstitialis</i>		40.30
<b>Sespe-Frazier- Mt Pinos Ranger District</b>			
tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>	X (in planning stages)	
<b>Sespe-Frazier- Ojai Ranger District</b>			
yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
totalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>		
Italian thistle <sup>2</sup>	<i>Carduus pycnocephalus</i>		
spotted knapweed <sup>2</sup>	<i>Centaurea maculosa</i>		
tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>Tequepis</b>			
yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
totalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		

Table 21. Invasive Non-Native Plants Known to Occur In Inventoried Roadless Areas			
Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Scientific Name	Treatments planned or occurring for the species <sup>3</sup>	Acres <sup>4</sup>
fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>White Ledge</b>			
tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		3.54
Fennel	<i>Foeniculum vulgare</i>		0.16
yellow star-thistle	<i>Centaurea solstitialis</i>		0.66
Cape-ivy <sup>2</sup>	<i>Delairea odorata</i>		
Harding grass <sup>2</sup>	<i>Phalaris aquatica</i>		
tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>San Bernardino National Forest</b>			
<b>Cactus Springs B</b>			
red brome	<i>Bromus rubens</i>		0.68
<b>Cucamonga C</b>			
tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		0.23
<b>Pyramid Peak A</b>			
tamarisk, salt cedar	<i>Tamarix ramosissima</i>	X	65.78
<b>Pyramid Peak A new</b>			
tamarisk, salt cedar	<i>Tamarix ramosissima</i>	X	4.69
<sup>1</sup> Data source: USFS NRM NRIS unless otherwise noted. The presence of non-native grasses was not included in this table unless there were acres identified in the USFS NRM NRIS data. Almost all Wilderness Evaluations noted presence of nonnative grasses within IRAs. <sup>2</sup> Data source: 2012 Wilderness Evaluations. Invasive plant species identified as “within or adjacent to the IRA” in the Wilderness Evaluations were not included in this table unless presence was also included in the USFS NRM NRIS data or confirmed by the forest or district biologist or botanist. <sup>3</sup> Treatment data source: Wilderness Evaluations and 2012 updated information from Forest Service botanists. Removal of non-native plants may be needed or proposed at any time even if not shown in planned or existing treatment column. <sup>4</sup> Species with no acres recorded are present but acreage too small for mapping unit.			



Table 22. Acreages of Mapped Invasive Plant Occurrences by Land Use Zone and Inventoried Roadless Areas																		
Alternative and Land Use Zone	Alternative 1 (No Action)						Alternative 2 (Proposed Action)						Alternative 3 (RW Emphasis)					
	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	Total Acres
<b>Angeles National Forest (ANF)</b>																		
<b>Red Mountain IRA</b>				<b>0.41</b>		<b>0.41</b>			<b>0.41</b>			<b>0.41</b>					<b>0.41</b>	<b>0.41</b>
• Spanish broom				0.41		0.41			0.41			0.41					0.41	0.41
<b>Salt Creek IRA</b>				<b>0.11</b>		<b>0.11</b>					<b>0.11</b>	<b>0.11</b>					<b>0.11</b>	<b>0.11</b>
• Yellow star thistle				0.11		0.11					0.11	0.11					0.11	0.11
<b>West Fork IRA</b>		<b>2.44</b>	<b>0.17</b>			<b>2.62</b>		<b>2.44</b>	<b>0.17</b>			<b>2.62</b>				<b>2.44</b>	<b>0.17</b>	<b>2.62</b>
• Spanish broom		0.26				0.26		0.26				0.26				0.26		0.26
• Tocalote (Maltese star thistle)		2.18	0.17			2.35		2.18	0.17			2.35				2.18	0.17	2.35
• Sweet clover			0			0			0			0					0	0
<b>Westfork IRA</b>	<b>2.7</b>			<b>0.17</b>		<b>2.87</b>	<b>2.7</b>			<b>0.17</b>		<b>2.87</b>	<b>2.7</b>			<b>0.17</b>		<b>2.87</b>
• Bull thistle	0					0	0					0	0					0
• Spanish broom	2.63			0.17		2.81	2.63			0.17		2.81	2.63			0.17		2.81
• Tree tobacco	0.06					0.06	0.06					0.06	0.06					0.06
• Washington fan palm	0					0	0					0	0					0
<b>ANF Totals</b>	<b>2.7</b>	<b>2.44</b>	<b>0.17</b>	<b>0.7</b>		<b>6.02</b>	<b>2.7</b>	<b>2.44</b>	<b>0.59</b>	<b>0.17</b>	<b>0.11</b>	<b>6.02</b>	<b>2.7</b>			<b>2.62</b>	<b>0.7</b>	<b>6.02</b>
<b>Cleveland National Forest (CNF)</b>																		
<b>Cedar Creek</b>		<b>4.61</b>				<b>4.61</b>		<b>4.61</b>				<b>4.61</b>					<b>4.61</b>	<b>4.61</b>
• Tamarisk (salt cedar)		4.61				4.61		4.61				4.61					4.61	4.61
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New IRA</b>	<b>1.06</b>					<b>1.06</b>	<b>0.98</b>				<b>0.08</b>	<b>1.06</b>					<b>1.06</b>	<b>1.06</b>
• Himalayan blackberry	0.28					0.28	0.27				0.02	0.28					0.28	0.28
• Italian plumeless thistle	0.78					0.78	0.72				0.06	0.78					0.78	0.78
<b>Upper San Diego River IRA</b>			<b>0.02</b>			<b>0.02</b>			<b>0.02</b>			<b>0.02</b>			<b>0.02</b>			<b>0.02</b>
• Common St. John's wort			0.02			0.02			0.02			0.02			0.02			0.02
<b>CNF Totals</b>	<b>1.06</b>	<b>4.61</b>	<b>0.02</b>			<b>5.69</b>	<b>0.98</b>	<b>4.61</b>	<b>0.02</b>		<b>0.08</b>	<b>5.69</b>			<b>0.02</b>		<b>5.67</b>	<b>5.69</b>
<b>Los Padres National Forest (LPNF)</b>																		
<b>Diablo</b>	<b>0.45</b>					<b>0.45</b>	<b>0.45</b>					<b>0.45</b>	<b>0.45</b>					<b>0.45</b>
• yellow star-thistle	0.45					0.45	0.45					0.45	0.45					0.45
<b>Dry Lakes IRA</b>	<b>3.13</b>			<b>0</b>		<b>3.13</b>	<b>3.13</b>			<b>0</b>		<b>3.13</b>	<b>3.13</b>			<b>0</b>		<b>3.13</b>

Table 22. Acreages of Mapped Invasive Plant Occurrences by Land Use Zone and Inventoried Roadless Areas																		
Alternative and Land Use Zone	Alternative 1 (No Action)						Alternative 2 (Proposed Action)						Alternative 3 (RW Emphasis)					
	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	Total Acres
• tocolote (Maltese star-thistle)	0.21					0.21	0.21					0.21	0.21					0.21
• Piney-woods Dropseed	2.61			0		2.61	2.61			0		2.61	2.61			0		2.61
• yellow star-thistle	0.31					0.31	0.31					0.31	0.31					0.31
<b>Juncal IRA</b>	13.82					13.82	13.82					13.82	13.82					13.82
• yellow star-thistle	13.82					13.82	13.82					13.82	13.82					13.82
<b>Sespe - Frazier IRA</b>	<b>29.72</b>	<b>0.05</b>	<b>16.19</b>	<b>13.47</b>		<b>59.43</b>	<b>18.83</b>	<b>0.05</b>	<b>27.08</b>	<b>13.47</b>		<b>59.43</b>	<b>18.8</b>		<b>6.9</b>	<b>13.47</b>	<b>20.26</b>	<b>59.43</b>
• tocolote (Maltese star-thistle)	1.16	0.05	2.34	12.41		15.97	1.51	0.05	1.99	12.41		15.97	1.51			12.41	2.05	15.97
• Piney-woods Dropseed	0.01		0			0.01			0.01			0.01			0		0.01	0.01
• Small flower tamarisk	1.57		0.52			2.09	2.08		0.01			2.09	2.08				0.01	2.09
• Fennel				1.06		1.06				1.06		1.06				1.06		1.06
• yellow star-thistle	26.98		13.33			40.3	15.24		25.06			40.3	15.21		6.89		18.2	40.3
<b>White Ledge IRA</b>		<b>4.29</b>	<b>0.07</b>			<b>4.36</b>		<b>4.29</b>	<b>0.07</b>			<b>4.36</b>		<b>4.19</b>			<b>0.17</b>	<b>4.36</b>
• tocolote (Maltese star-thistle)		3.54				3.54		3.54				3.54		3.53			0	3.54
• fennel		0.16				0.16		0.16				0.16		0.16				0.16
• yellow star-thistle		0.59	0.07			0.66		0.59	0.07			0.66		0.5			0.16	0.66
<b>LPNF Totals</b>	<b>47.12</b>	<b>4.34</b>	<b>16.26</b>	<b>13.47</b>		<b>81.2</b>	<b>36.23</b>	<b>4.34</b>	<b>27.15</b>	<b>13.47</b>		<b>81.2</b>	<b>36.2</b>	<b>4.19</b>	<b>6.9</b>	<b>13.47</b>	<b>20.43</b>	<b>81.2</b>
<b>San Bernardino National Forest (SBNF)</b>																		
<b>Cactus Springs B IRA</b>	<b>0.68</b>					<b>0.68</b>	<b>0.47</b>		<b>0.22</b>			<b>0.68</b>	<b>0.47</b>				<b>0.22</b>	<b>0.68</b>
• red brome	0.68					0.68	0.47		0.22			0.68	0.47				0.22	0.68
<b>Cucamonga C IRA</b>	<b>0.08</b>		<b>0.15</b>			<b>0.23</b>	<b>0.15</b>		<b>0.08</b>			<b>0.23</b>	<b>0.08</b>	<b>0.08</b>			<b>0.08</b>	<b>0.23</b>
• Tocolot (Maltese star-thistle)	0.08		0.15			0.23	0.15		0.08			0.23	0.08	0.08			0.08	0.23
<b>Pyramid Peak A IRA</b>	<b>0.11</b>	<b>9.66</b>	<b>28.29</b>		<b>27.72</b>	<b>65.78</b>			<b>38.06</b>		<b>27.72</b>	<b>65.78</b>					<b>65.78</b>	<b>65.78</b>
• Tamarisk (salt cedar)	0.11	9.66	28.29		27.72	65.78			38.06		27.72	65.78					65.78	65.78
<b>Pyramid Peak A New IRA</b>					<b>4.69</b>	<b>4.69</b>					<b>4.69</b>	<b>4.69</b>					<b>4.69</b>	<b>4.69</b>
• Tamarisk (Saltcedar)					4.69	4.69					4.69	4.69					4.69	4.69
<b>SBNF Totals</b>	<b>0.87</b>	<b>9.66</b>	<b>28.44</b>		<b>32.4</b>	<b>71.38</b>	<b>0.62</b>		<b>38.35</b>		<b>32.4</b>	<b>71.38</b>	<b>0.54</b>	<b>0.08</b>			<b>70.76</b>	<b>71.38</b>
<b>GRAND TOTALS</b>	<b>51.75</b>	<b>21.06</b>	<b>44.9</b>	<b>14.17</b>	<b>32.4</b>	<b>164.3</b>	<b>40.53</b>	<b>11.39</b>	<b>66.11</b>	<b>13.65</b>	<b>32.59</b>	<b>164.3</b>	<b>39.44</b>	<b>4.27</b>	<b>6.92</b>	<b>16.09</b>	<b>97.55</b>	<b>164.3</b>

Table 23. Non-Native Animal Occurrences by Forest and IRA		
Invasive Animal Species Occurrences <sup>1</sup>	Scientific Name	Planned/Existing Treatments
<b>Cleveland National Forest</b>		
<b>Cedar Creek, Eagle Peak, Upper San Diego River</b>		
Feral pig	<i>Sus scrofa</i>	X
Bull frog	<i>Rana catesbiana</i>	X
Non-native fish		X
<b>Eagle Peak</b>		
Feral pig	<i>Sus scrofa</i>	X
Bull frog	<i>Rana catesbiana</i>	X
Non-native fish		X
<b>No Name</b>		
Feral pig	<i>Sus scrofa</i>	X
<b>Upper San Diego River</b>		
Feral pig	<i>Sus scrofa</i>	X
Bull frog	<i>Rana catesbiana</i>	X
Non-native fish		X
<b>Caliente, Barker Valley</b>		
Feral pig	<i>Sus scrofa</i>	X
<b>Los Padres</b>		
<b>Juncal</b>		
Bullfrog	<i>Rana catesbiana</i>	
Sunfish	<i>Lepomis</i> sp.	
Bullhead fish	<i>Ameiurus (Ictalurus) melas</i>	
<b>Malduke Buckhorn</b>		
Bullfrog	<i>Rana catesbiana</i>	
<b>Sespe- Frazier Mount Pinos District</b>		
Bullfrog	<i>Rana catesbiana</i>	
<b>Sespe-Frazier-Ojai Ranger District</b>		
Bullfrog	<i>Rana catesbiana</i>	
<sup>1</sup> Data source: 2012 Wilderness Evaluations <sup>2</sup> Data source: Wilderness Evaluations and 2012 updated information from Forest biologists/botanists. Removal of non-native animals may be needed or proposed at any time even if not shown in planned or existing treatment column.		

### **VI-2.3 – Potential Effects to the Risk of Introduction, Spread, and Management of Non-Natives**

The two issues related to non-native species management are related directly to how changes in Land Use Zones could influence the spread of non-native species and whether the available control methods would vary by LUZs. This section describes how those changes in LUZs relate to the non-native species spread and control issues.

See **Table 6** for a summary of management actions that are considered in the evaluation of the potential for introduction and spread of non-native plants and animals.

#### **VI-2.3.1 Effects to the Risk of Introduction and Spread of Non-Native Plants and Animals** **Alternative 1- No Action**

Implementation of Alternative 1 would have no change in the existing introduction and establishment of non-native plants and animals along roads and trails or on land disturbed by construction, maintenance and use of SUP facilities or recreational activities. Alternative 1 has the highest potential for the introduction and spread of non-native plant and animals species based on the types and acreages of suitable uses allowed. In addition, all unauthorized routes would retain their LUZs which could have a lower priority for restoration, thus providing a higher risk of non-native seed, plant, and animal transport into the IRAs.

#### **Alternative 2- Proposed Action**

Implementation of Alternative 2 would have no change in the existing introduction and establishment of non-native plants and animals along designated motorized roads and trails. There could be a minimal reduction in potential for introduction and spread of non-native species via use, maintenance, and access due to a slight reduction in mountain bike use on trails.

The introduction and spread of non-native plants and animals may be less likely to occur as more unauthorized routes are zoned BCNM. A change in zoning to BCNM could influence priority restoration work. Spread of non-native species into areas disturbed by construction, maintenance and use of SUP facilities or recreational activities could decrease in Alternative 2 as less acreage would be suitable for these uses. Alternative 2 has a lower potential for the introduction and spread of non-native plant and animals species based on the types and acreages of suitable uses allowed.

This alternative has a higher potential for habitat resiliency against establishment of non-native species as fewer acres would potentially be disturbed.

#### **Alternative 3- Recommended Wilderness Emphasis**

Implementation of Alternative 3 may have the greatest potential to reduce non-native plant and animal introductions from use, maintenance, and access provided by Forest system roads and trails for areas where roads and trails would be closed to motorized/mechanical use.

There would be no difference in the likelihood of introductions along motorized trails from Alternatives 1 or 2. The highest potential to reduce non-native plant introductions from mountain bike use resulting from restrictions in RW would mainly occur in three of the 37 IRAs.

Alternative 3 may have the greatest potential to reduce introductions along unauthorized routes as the largest number of miles (123.3 miles) would be in RW which could have a higher priority for restoration. Alternative 3 may have the greatest potential to reduce spread of non-native plants on lands disturbed under special use management. Reduction of edge effects that favor some non-native species may also be lowest in this alternative.

This alternative has the highest potential for habitat resiliency against establishment of non-native species as the fewest acres would potentially be disturbed.

#### VI-2.3.2 Effects to Management of Non-Native Species

Management of non-native plants and animals is conducted in an ongoing manner on all four National Forests using a variety of methods.

Under all three alternatives, non-native species management activities that are consistent with the Forest Plan, laws, policies and regulation would continue in all LUZs and RW.

### **VI-3.0 – RISK DETERMINATION AND SUMMARY**

**Table 24** summarizes the potential effects in terms of introduction, establishment, spread, and management of non-native plants and animals for each Alternative.

The risk for the potential introduction, establishment and spread of non-native plants and animals may be highest under Alternative 1 (No Action). This risk is due to the greatest amount of motorized and mechanized access, and the least potential to prioritize, decommission and restore the 188 miles of unauthorized routes within the IRAs. There is also higher risk that some nonnative animals would be attracted to the edge effect along these routes and that potential disturbance from other suitable uses could promote conditions for nonnative plant and animals to persist. This risk is highest in this alternative due to the types and acreages of suitable uses that would be allowed within the current land use zones.

The risks may be lower in Alternative 2 due to the potential for a slightly lower number of roads/trails available for mechanical (*i.e.*, mountain bikes) and motorized vehicles and reduced acreage for suitable uses within land use zones and recommended wilderness. Risks would be lowest in Alternative 3 due the highest acres of RW having the fewest miles available for mountain biking and the fewest acres available for suitable uses. Risk would also be reduced in Alternatives 2 and 3 as more priority is placed on the decommissioning and restoration of unauthorized roads within BCNM LUZ and RW respectively.

The ability to detect, control, and eradicate non-native plants and animals would remain the same under all alternatives.

<b>Table 24. Effects Of All Alternatives On Non-Native Species Introduction, Spread, and Management Actions</b>				
<b>Effect</b>	<b>Indicator</b>	<b>Alternative 1 (No Action)</b>	<b>Alternative 2 (Proposed Action)</b>	<b>Alternative 3 (RW Emphasis)</b>
<b>Non-native Species Introductions and Spread of Established Occurrences</b>	Potential for introductions and spread of non-native species from roads, trails, Special Uses, recreation, and other Forest management activities (see <b>Table 6</b> for a summary of the management activities).	No change from existing environment	Greater potential to reduce non-native species introductions and spread than Alternative 1.	Greatest potential to reduce non-native species introductions and spread than Alternative 1 and 2.
<b>Non-native Species Control and Eradication Treatments</b>	Number of non-native species affected.	No change from existing environment	Same as Alternative 1.	Same as Alternative 1.
	Ability to conduct management activities of non-native species to promote recovery of TES and native species and habitats.	Can implement as funds allow per Draft SEIS Suitable Uses Table.	Same as Alternative 1.	Same as Alternative 1.

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Critical Habitat: <http://criticalhabitat.fws.gov>

Wildlife Habitat Relationships: CDFG -<http://www.dfg.ca.gov/whdab/cwhr/whrintro.html>

## APPENDIX A: MANAGEMENT DIRECTION

### **1.0 FEDERAL LAWS**

#### **1.1 Endangered Species Act**

Pursuant to Section 7 of the Federal Endangered Species Act (ESA), any federal agency undertaking a federal action that may affect a species listed or proposed as Threatened or Endangered under the ESA must consult with USFWS. In addition, any federal agency undertaking a federal action that may result in adverse modification of Critical Habitat for a federally-listed species must consult with USFWS.

The Endangered Species Act contains protection for all species federally-listed as Endangered or Threatened:

- *Federal agencies shall seek to conserve Endangered species and Threatened species and shall, in consultation with U.S. Fish and Wildlife Service, utilize their authorities in furthering the purposes of the Endangered Species Act by carrying out programs for the conservation of Endangered and Threatened species.*
- *Regulations for species that are proposed for listing as Endangered or Threatened are included in the Endangered Species Act*
- *Federal agencies shall confer with U.S. Fish and Wildlife Service on any agency action that is likely to jeopardize the continued existence of any species proposed to be listed.*

#### **1.2 Clean Water Act**

Pursuant to Section 404 of the Clean Water Act, the Army Corps of Engineers (ACOE) regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined at 33 CFR Part 328 and includes (1) all navigable waters (including all waters subject to the ebb and flow of the tide), (2) all interstate waters and wetlands, (3) all impoundments of waters mentioned above, (4) all tributaries to waters mentioned above, (5) the territorial seas, and (6) all wetlands adjacent to waters mentioned above.

Wetlands are defined (33 CFR 328.3[b]) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." A recent U.S. Supreme Court decision ("SWANCC", 2001) has determined that Corps jurisdiction may not necessarily extend to intrastate waters and wetlands where the only federal nexus is potential use by migratory birds.

Issuance of a Section 404 Permit to discharge dredged or fill material into jurisdictional waters is considered a federal action and cannot be undertaken by the Corps if the permitted actions could adversely affect federally-listed (or proposed) Endangered or Threatened species.

#### **1.3 National Forest Management Act**

The National Forest Management Act of 1976 and its implementing regulations (CFR 219) state that: *fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area (Sec 219.19)".* Sec 219.19 also calls for the use of management indicator species to *indicate the effects of management activities.* In addition, the Secretary of Agriculture's policy on fish and wildlife (Department Regulation 9500-4) directs the Forest Service to avoid actions *"which may cause a species to become Threatened or Endangered"*.

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### **2.0 AGENCY DIRECTION**

#### **2.1 Forest Service Manual – Non-Native Species Management**

Forest Service Manual direction for Invasive Species Management is contained in a new manual section, FSM 2900, effective December 5, 2011. This direction sets forth National Forest System policy, responsibilities, and direction for the prevention, detection, control, and restoration of effects from aquatic and terrestrial non-native species (including vertebrates, invertebrates, plants, and pathogens). This new chapter replaces FSM 2080 (Noxious Weed Management). Some of the policy direction found in FSM 2900 is excerpted below:

1. Initiate, coordinate, and sustain actions to prevent, control, and eliminate priority infestations of invasive species in aquatic and terrestrial areas of the National Forest System using an integrated pest management approach, and collaborate with stakeholders to implement cooperative invasive species management activities in accordance with law and policy.
2. When applicable, invasive species management actions and standards should be incorporated into resource management plans at the forest level, and in programmatic environmental planning and assessment documents at the regional or national levels.
3. Determine the vectors, environmental factors, and pathways that favor the establishment and spread of invasive species in aquatic and terrestrial areas the National Forest System, and design management practices to reduce or mitigate the risk for introduction or spread of invasive species in those areas.
4. Determine the risk of introducing, establishing, or spreading invasive species associated with any proposed action, as an integral component of project planning and analysis, and where necessary provide for alternatives or mitigation measures to reduce or eliminate that risk prior to project approval.
5. Ensure that all Forest Service management activities are designed to minimize or eliminate the possibility of establishment or spread of invasive species on the National Forest System, or to adjacent areas. Integrate visitor use strategies with invasive species management activities on aquatic and terrestrial areas of the National Forest System. At no time are invasive species to be promoted or used in site restoration or re-vegetation work, watershed rehabilitation projects, planted for bio-fuels production, or other management activities on National Forests and grasslands.
6. Use contract and permit clauses to require that the activities of contractors and permittees are conducted to prevent and control the introduction, establishment, and spread of aquatic and terrestrial invasive species. For example, where determined to be appropriate, use agreement clauses to require contractors or permittees to meet Forest Service-approved vehicle and equipment cleaning requirements/standards prior to using the vehicle or equipment in the National Forest System.
7. Make every effort to prevent the accidental spread of invasive species carried by contaminated vehicles, equipment, personnel, or materials (including plants, wood, plant/wood products, water, soil, rock, sand, gravel, mulch, seeds, grain, hay, straw, or other materials).

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- a) Establish and implement standards and requirements for vehicle and equipment cleaning to prevent the accidental spread of aquatic and terrestrial invasive species on the National Forest System or to adjacent areas.
  - b) Make every effort to ensure that all materials used on the National Forest System are free of invasive species and/or noxious weeds (including free of reproductive/propagative material such as seeds, roots, stems, flowers, leaves, larva, eggs, veligers, and so forth).
8. Where States have legislative authority to certify materials as weed-free (or invasive-free) and have an active State program to make those State-certified materials available to the public, forest officers shall develop rules restricting the possession, use, and transport of those materials unless proof exists that they have been State-certified as weed-free (or invasive-free), as provided in 36 CFR 261 and Departmental Regulation 1512-1.
9. Monitor all management activities for potential spread or establishment of invasive species in aquatic and terrestrial areas of the National Forest System.
10. Manage invasive species in aquatic and terrestrial areas of the National Forest System using an integrated pest management approach to achieve the goals and objectives identified in Forest Land and Resource Management plans, and other Forest Service planning documents, and other plans developed in cooperation with external partners for the management of natural or cultural resources.
11. Integrate invasive species management funding broadly across a variety of National Forest System programs, while associating the funding with the specific aquatic or terrestrial invasive species that is being prioritized for management, as well as the purpose and need of the project or program objective.
12. Develop and utilize site-based and species-based risk assessments to prioritize the management of invasive species infestations in aquatic and terrestrial areas of the National Forest System. Where appropriate, use a structured decision-making process and adaptive management or similar strategies to help identify and prioritize invasive species management approaches and actions.
13. Comply with the Forest Service performance accountability system requirements for invasive species management to ensure efficient use of limited resources at all levels of the Agency and to provide information for adapting management actions to meet changing program needs and priorities. When appropriate, utilize a structured decision making process to address invasive species management problems in changing conditions, uncertainty, or when information is limited.
14. Establish and maintain a national record keeping database system for the collection and reporting of information related to invasive species infestations and management activities, including invasive species management performance, associated with the National Forest System. Require all information associated with the National Forest System invasive species management (including inventories, surveys, and treatments) to be collected, recorded, and reported consistent with national program protocols, rules, and standards.
15. Where appropriate, integrate invasive species management activities, such as inventory, survey, treatment, prevention, monitoring, and so forth, into the National Forest System management programs. Use inventory and treatment information to help set priorities and

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select integrated management actions to address new or expanding invasive species infestations in aquatic and terrestrial areas of the National Forest System.

16. Assist and promote cooperative efforts with internal and external partners, including private, State, tribal, and local entities, research organizations, and international groups to collaboratively address priority invasive species issues affecting the National Forest System.
17. Coordinate as needed with Forest Service Research and Development and State and Private Forestry programs, other agencies included under the National Invasive Species Council, and external partners to identify priority/high-risk invasive species that threaten aquatic and terrestrial areas of the National Forest System. Encourage applied research to develop techniques and technology to reduce invasive species impacts to the National Forest System.
18. As appropriate, collaborate and coordinate with adjacent landowners and other stakeholders to improve invasive species management effectiveness across the landscape. Encourage cooperative partnerships to address invasive species threats within a broad geographical area.

### 2.2 Other Direction for Non-Native Plant Management

The expected consequences for the management of non-native plant species under each alternative are analyzed in the Non-Native Risk Assessment for this project. The Draft SEIS for the amendment to the Southern California National Forests LMP relies on the assumption that management direction would be implemented consistently across the southern California National Forests under all alternatives and would generally be effective in mitigating impacts. It assumes the current direction would be included in all alternatives and that USFS policy direction updated since the Plan revision would be also implemented. These include:

- Forest Service, Vegetation Management Policy (FSM 2060 2/13/2008).
- Forest Service, Ecological Restoration and Resilience Policy (FSM 2020 9/30/2011)
  - R5 Ecological Restoration Leadership Intent (RO letter dated 5/3/2010)
- Forest Service, R5 Soil and Water Conservation Handbook (FSH 2509.22 12/5/2011)
- Forest Service, Southern California NF Supplement to FSH 2509.22 regarding Soil and Water Conservation Practices (USDA Forest Service 2006)
- Forest Service, Invasive Species Management Policy (FSM 2900 12/5/2011)

### 2.3 Roadless Area Conservation Rule – Management Direction

- The RACR (36 CFR 294 subpart B) would have the greatest influence on the transportation development within the IRAs.
- The types of activities allowable within each land use zone and IRA lands managed under the RACR would be based on Suitable Use Tables 50 - 53.

### 2.4 Wilderness Act and Wilderness Management Direction

- The Wilderness Act (P.L. 88-577; 16 U.S.C. §§ 1131-1136) explicitly directed that the wilderness designations had no effect on state jurisdiction or responsibilities over fish and wildlife; § 4(d)(8) states that “nothing in this Act shall be construed as affecting the

## APPENDIX A: MANAGEMENT DIRECTION

jurisdiction or responsibilities of the several States with respect to wildlife and fish in the National Forests.” This direction allows agencies such as California Department of Fish and Game to continue to manage wildlife species as necessary even in recommended wilderness or existing wilderness land use zones.

- The Wilderness Act also allows uses, activities, or infrastructure that does not conform to the general prohibitions on commercial activities, motorized access, and infrastructure. Many of these nonconforming permitted uses were explicitly allowed in the Wilderness Act, including access for management and emergencies, as well as activities for continued motorized access, livestock grazing, and water project developments. Subsequent statutes have expanded on these provisions and have addressed additional concerns, such as fish and wildlife management activities, development or maintenance of and access to certain existing and potential infrastructure, and access for other specific purposes (CRS 2011). This is particularly important for actions necessary to protect or recover Threatened or Endangered species “including habitat manipulation and species protection measures, and damage control for non-indigenous species”.

### 2.5 Appropriate Activities/Actions in Land Use Zones

- Recreation would continue on National Forests regardless of land use zoning. However, the type of recreation (i.e., motorized driving vs. hiking) would change as land use zones change.
- No assumptions can be made that recreation would decrease with more restrictive land use zones.
- Likewise, the designations of “recommended wilderness” may not necessary result in any changes in recreation levels in these specific IRAs.

## **3.0 CONSISTENCY WITH MANAGEMENT GOALS, LAWS, REGULATIONS, ETC.**

### 3.1 Land Management Plan

The revised Land Management Plans (LMPs) (USDA Forest Service 2006) for the four southern California Forests contain management goals, some of which are applicable to the management of botanical resources and non-native species. Those goals are displayed in the following table along with a summary of the project consistency with the direction.

<b>Consistency Review for Botanical Resources and Invasive Species</b>	
<b>Management Direction</b>	<b>LMP Consistency Review</b>
<b><i>Forest Goals Related to Botanical Resources and Invasive Species</i></b>	
Forest Goal 2.1 – Reverse the Trend of Increasing Loss of Natural Resource Values Due to Invasive Species	Alternative A may result in the least opportunity, Alternative B may result in greater opportunity, and Alternative C may result in the greatest opportunity to meet Forest Goals and desired conditions for TES and non-native species and general botanical resources.

## APPENDIX A: MANAGEMENT DIRECTION

Consistency Review for Botanical Resources and Invasive Species	
Management Direction	LMP Consistency Review
Forest Goal 6.2 – Provide Ecological Conditions to Sustain Viable Populations of Native and Desired Non-Native Species	All three alternatives are consistent with LMP direction. Alternatives 2 and 3 may improve the ability of the Forests to manage botanical resources due to management direction in the LMP through a reduction of effects from roads/trails, special uses, development, and other activities on NFS lands. Alternative 3 may provide higher management ability than Alternative 2.
Forest Service Manual and Handbook Direction	
FSM Direction for Invasive Species (FSM 2900; 12/5/11) – Direction for prevention, detection, control, and restoration of effects from aquatic and terrestrial invasive species (including vertebrates, invertebrates, plants, and pathogens).	All three alternatives are consistent with the FSM direction. Alternatives 2 and 3 may provide for increased abilities to prevent, control, and restore habitats from the effects of non-native invasive plants.

### 3.2 Other Laws, Regulations, and Direction

The following table displays other laws and regulations that are related to the management of botanical resources and non-native species. Additionally, the table contains a consistency review for the alternatives.

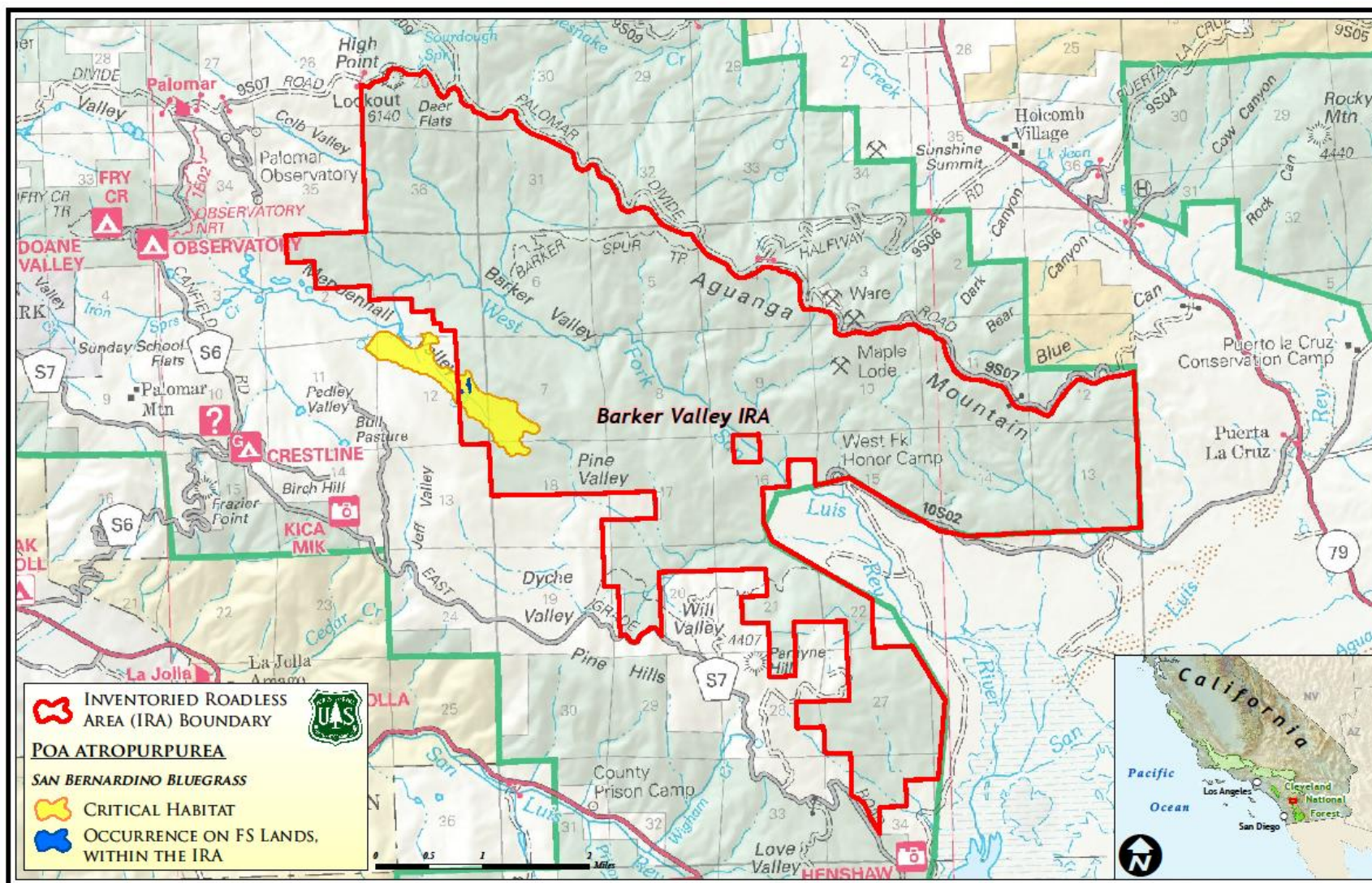
Consistency with Laws and Regulations and other Guidelines Related to Botanical Resources and Invasive Species				
Law or Regulation	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)	Consistency Review
Roadless Area Conservation Rule (36 CFR 294 subpart B) (RACR)	No change.	Would reduce future opportunities to develop transportation systems on NFS lands.	Would further reduce future opportunities to develop transportation systems on NFS lands.	All alternatives are consistent with the RACR.
Endangered Species Act (ESA)	Some ongoing effects T/E species and Critical Habitat	Beneficial effects to <i>Poa atropurpurea</i> and to Critical Habitat for <i>Poa atropurpurea</i> and <i>Chlorogalum purpureum</i> var. <i>reductum</i>	Beneficial effects to <i>Poa atropurpurea</i> and to Critical Habitat for <i>Poa atropurpurea</i> and <i>Chlorogalum purpureum</i> var. <i>reductum</i>	Section 7 ESA Consultation with USFWS would ensure consistency with ESA.



## APPENDIX A: MANAGEMENT DIRECTION

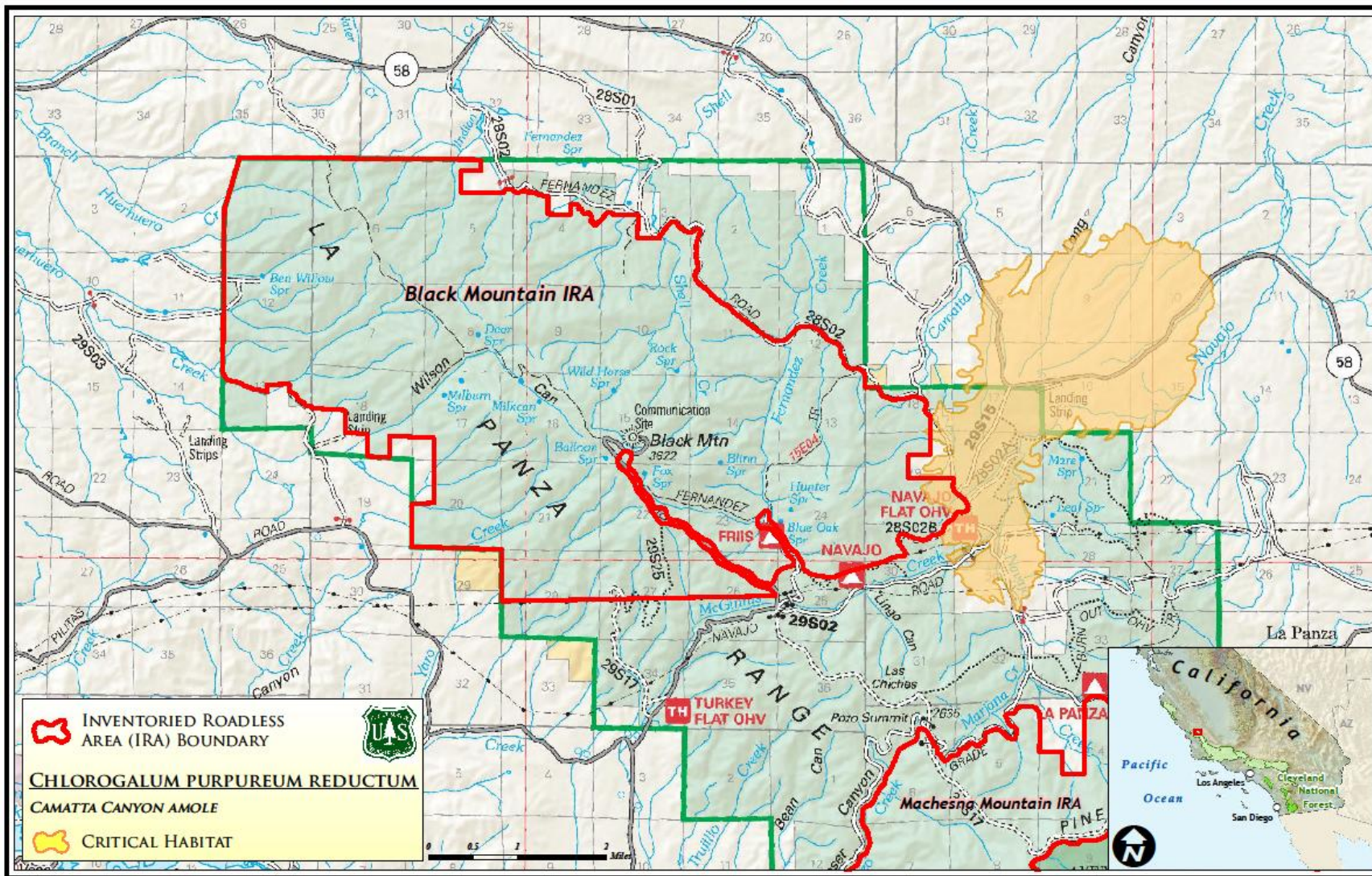
Consistency with Laws and Regulations and other Guidelines Related to Botanical Resources and Invasive Species				
Law or Regulation	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3 (RW Emphasis)	Consistency Review
USFWS Biological Opinions	Would not affect Forest Service ability to implement Terms and Conditions from Existing Biological Opinions.	Would not affect Forest Service ability to implement Terms and Conditions from Existing Biological Opinions.	Would not affect Forest Service ability to implement Terms and Conditions from Existing Biological Opinions.	All alternatives are consistent with implementation of terms and conditions from existing BOs.
Clean Water Act (CWA)	Would not affect Forest Service ability to comply with CWA.	Would not affect Forest Service ability to comply with CWA.	Would not affect Forest Service ability to comply with CWA.	All alternatives are consistent with the CWA.

## APPENDIX B: MAP PACKET – THREATENED AND ENDANGERED PLANTS



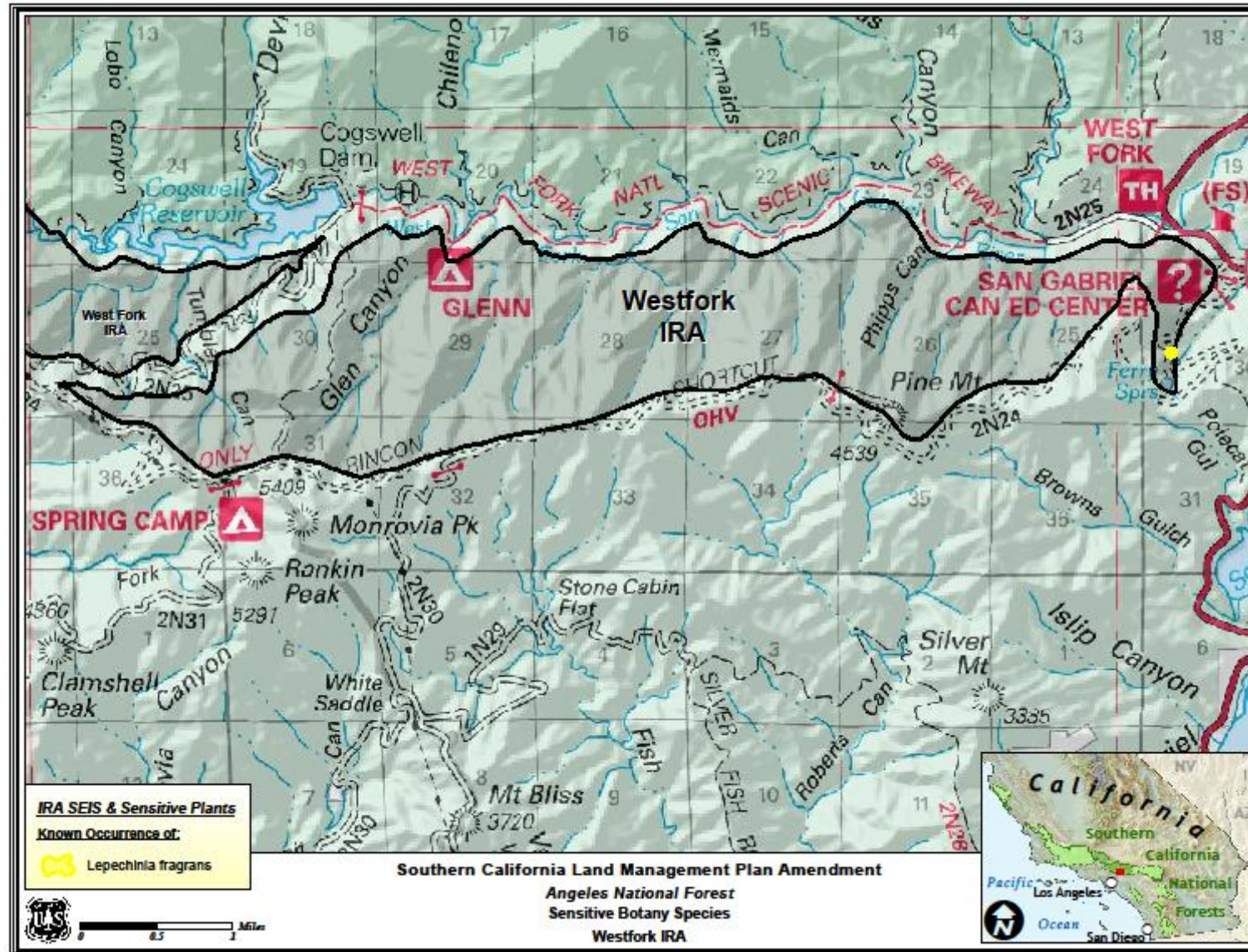


## APPENDIX B: MAP PACKET – THREATENED AND ENDANGERED PLANTS



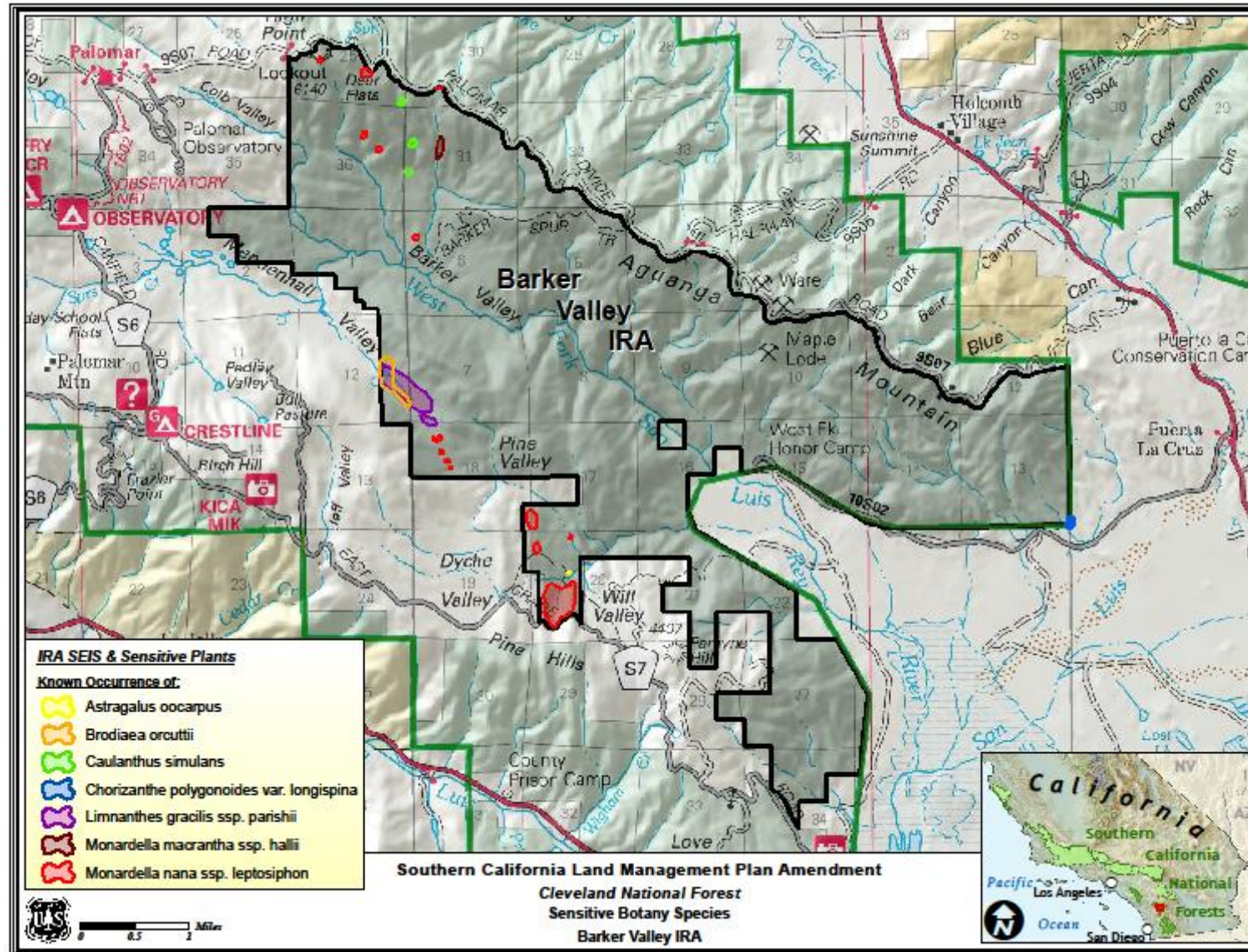


## APPENDIX B: MAP PACKET – SENSITIVE AND OTHER RARE PLANTS – ANGELES NATIONAL FOREST



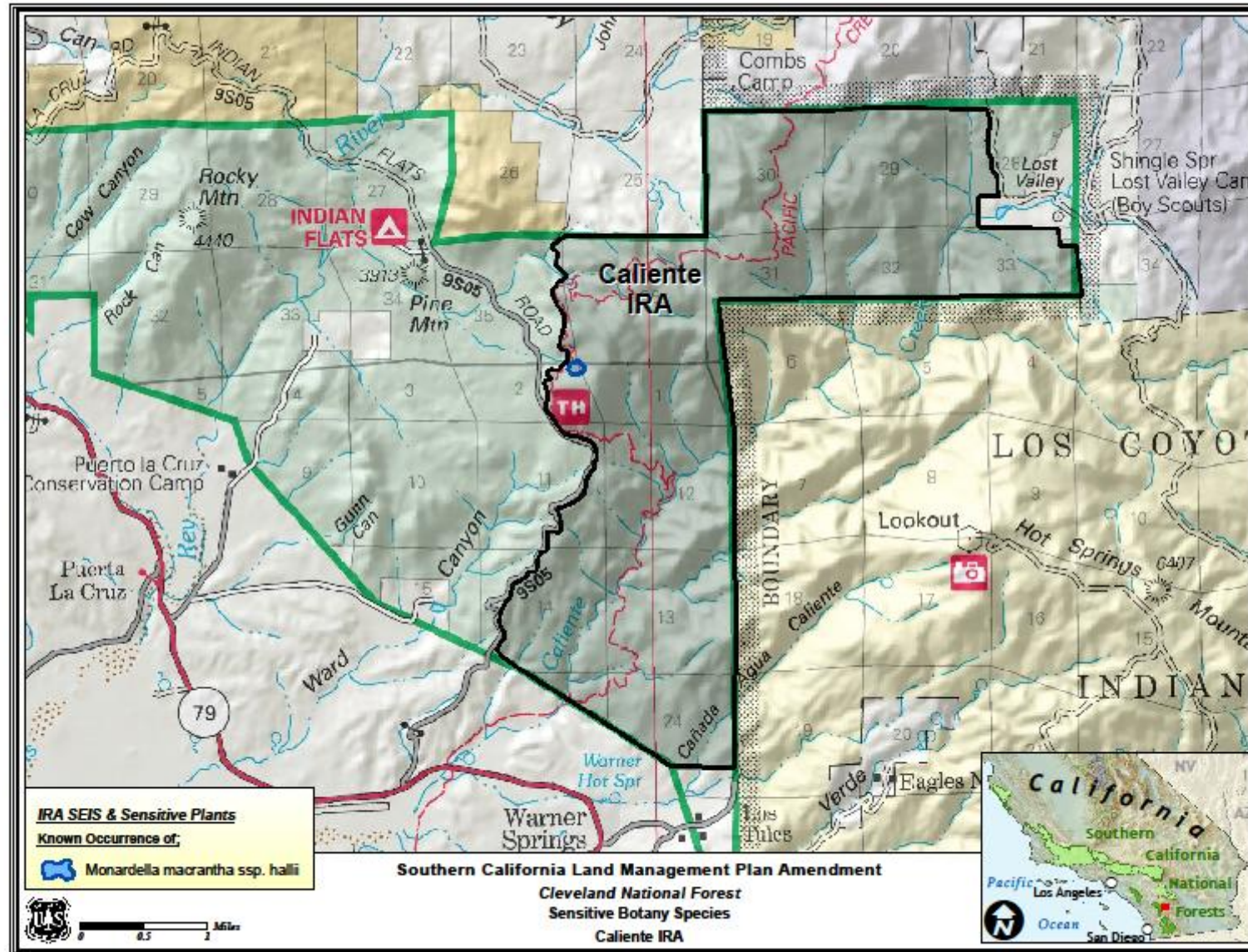


## APPENDIX B: MAP PACKET – SENSITIVE AND OTHER RARE PLANTS – CLEVELAND NATIONAL FOREST



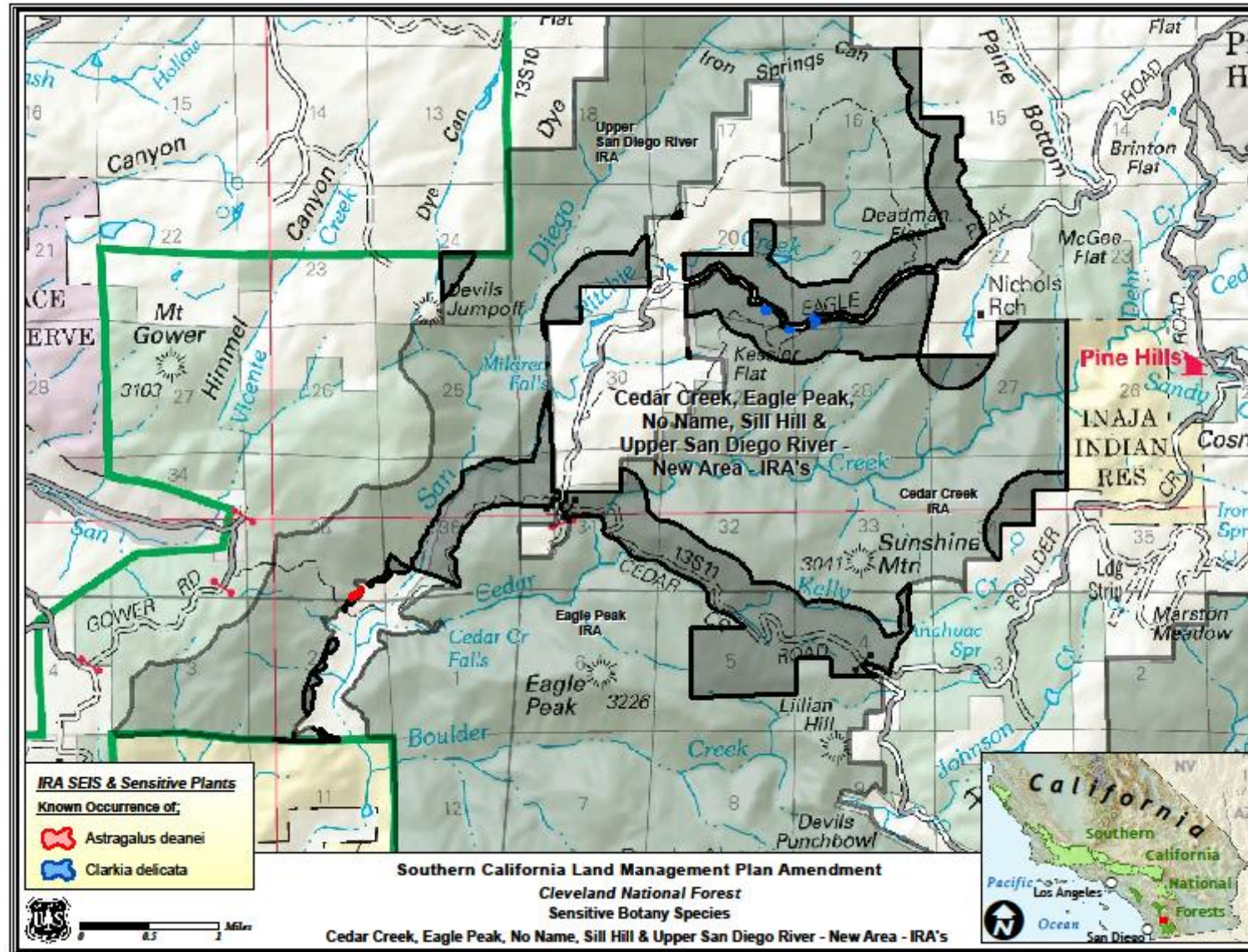


## APPENDIX B: MAP PACKET – SENSITIVE AND OTHER RARE PLANTS – CLEVELAND NATIONAL FOREST



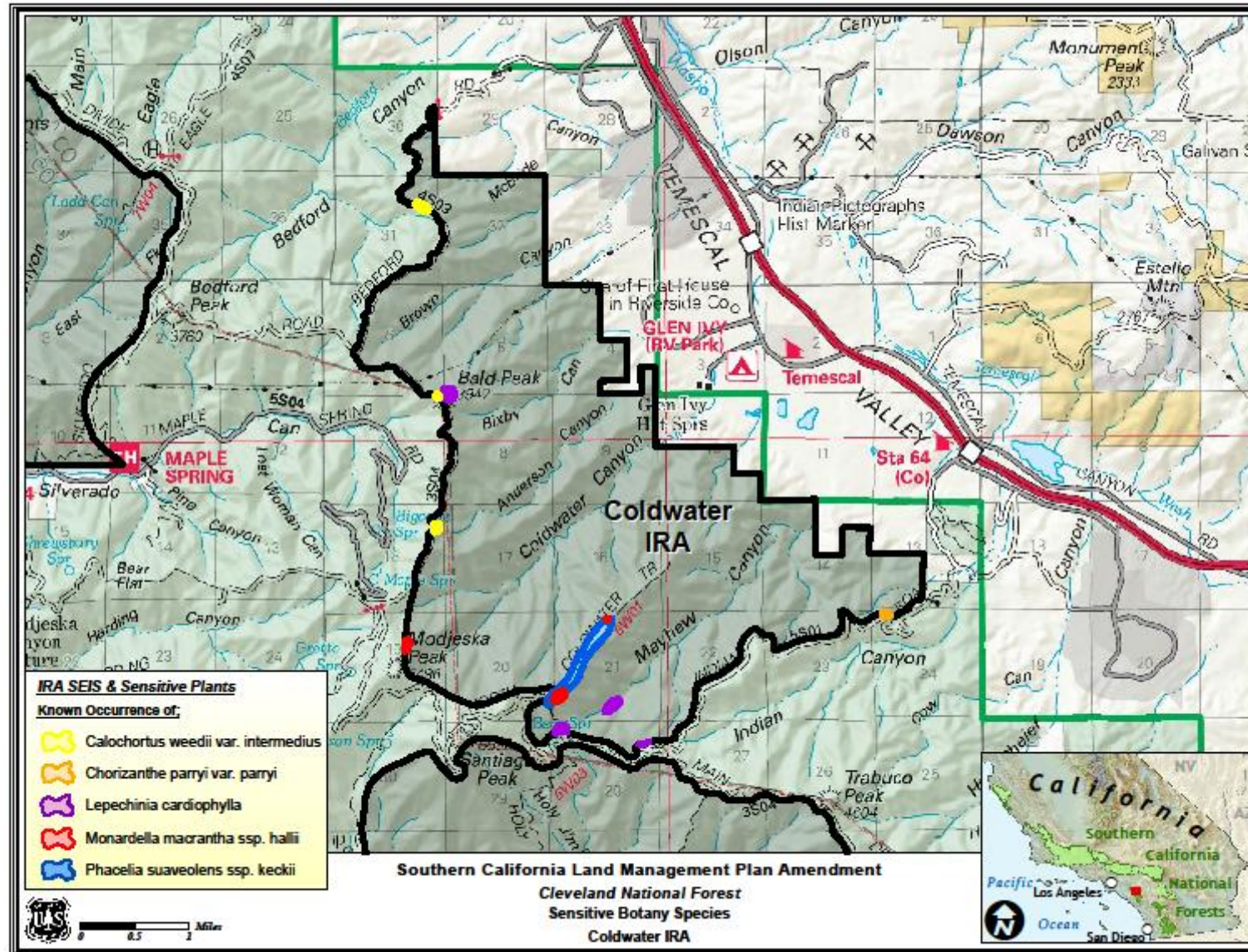


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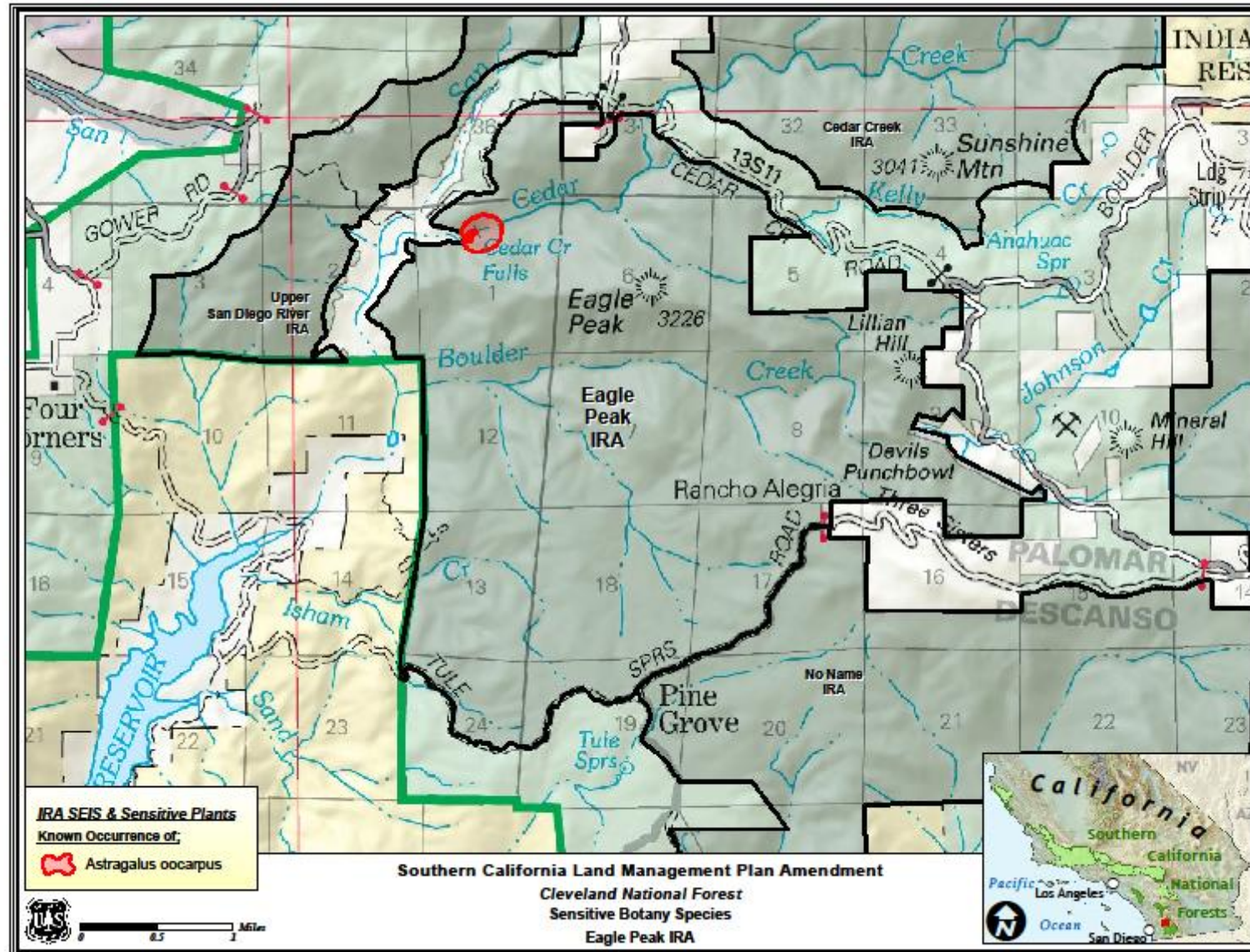


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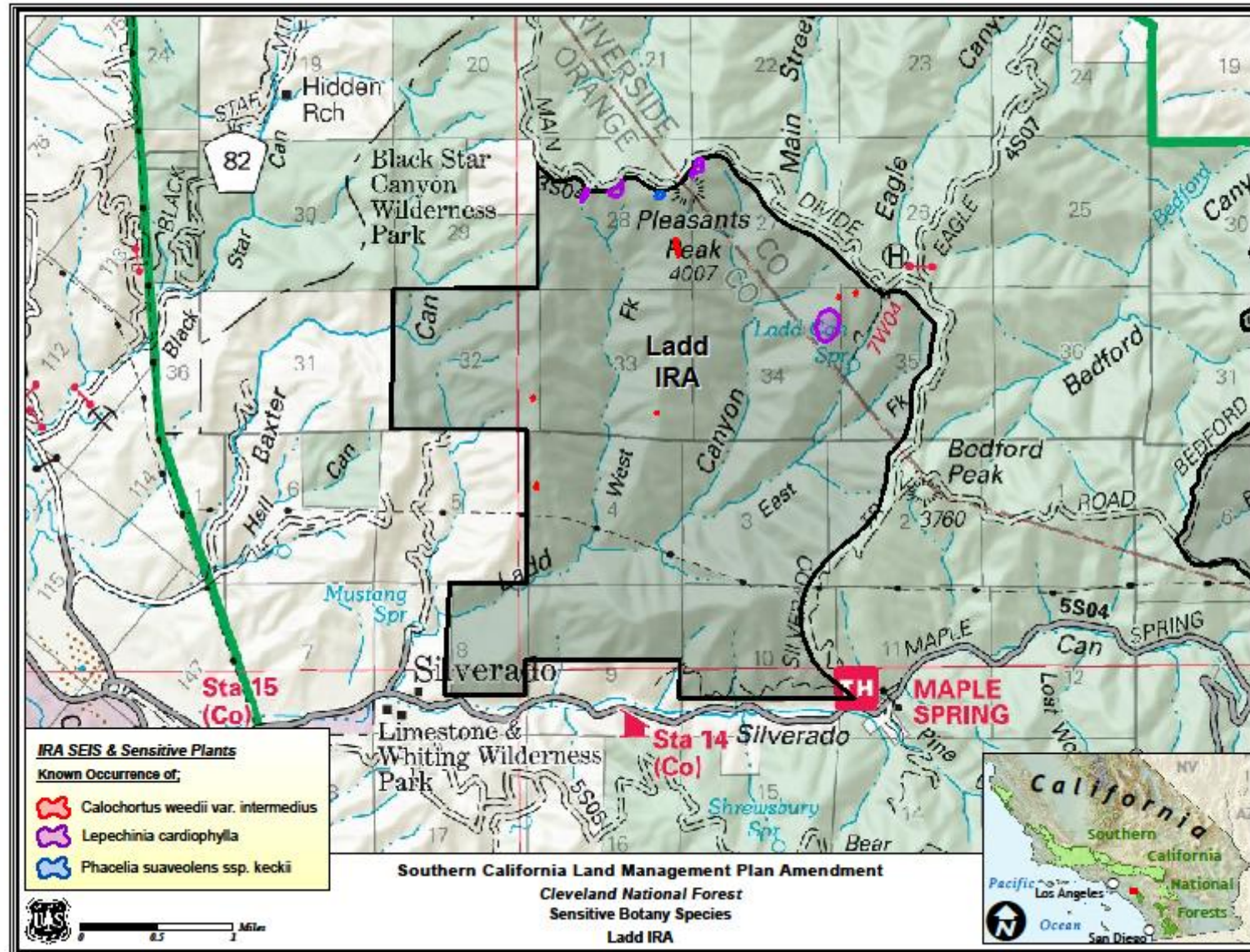


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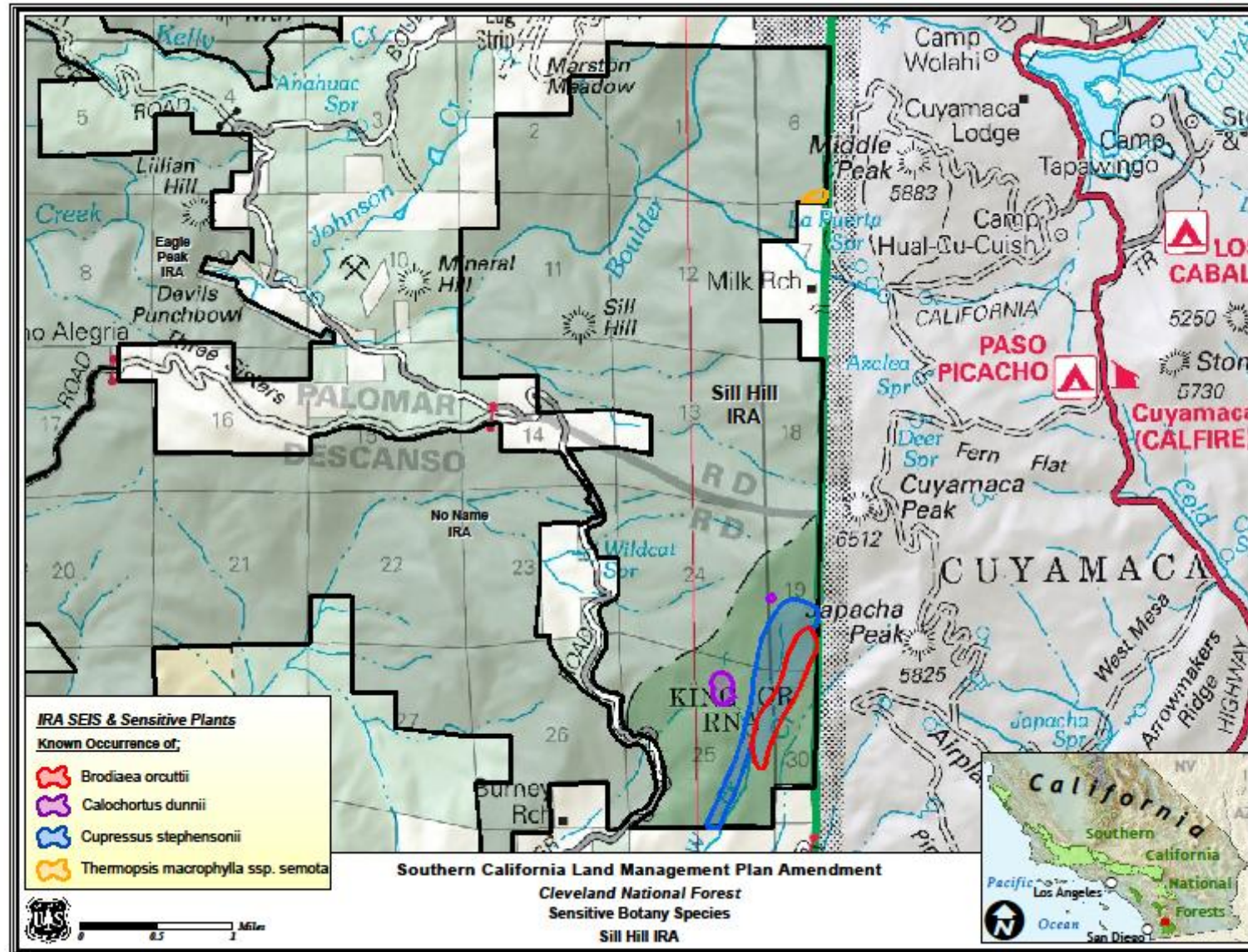


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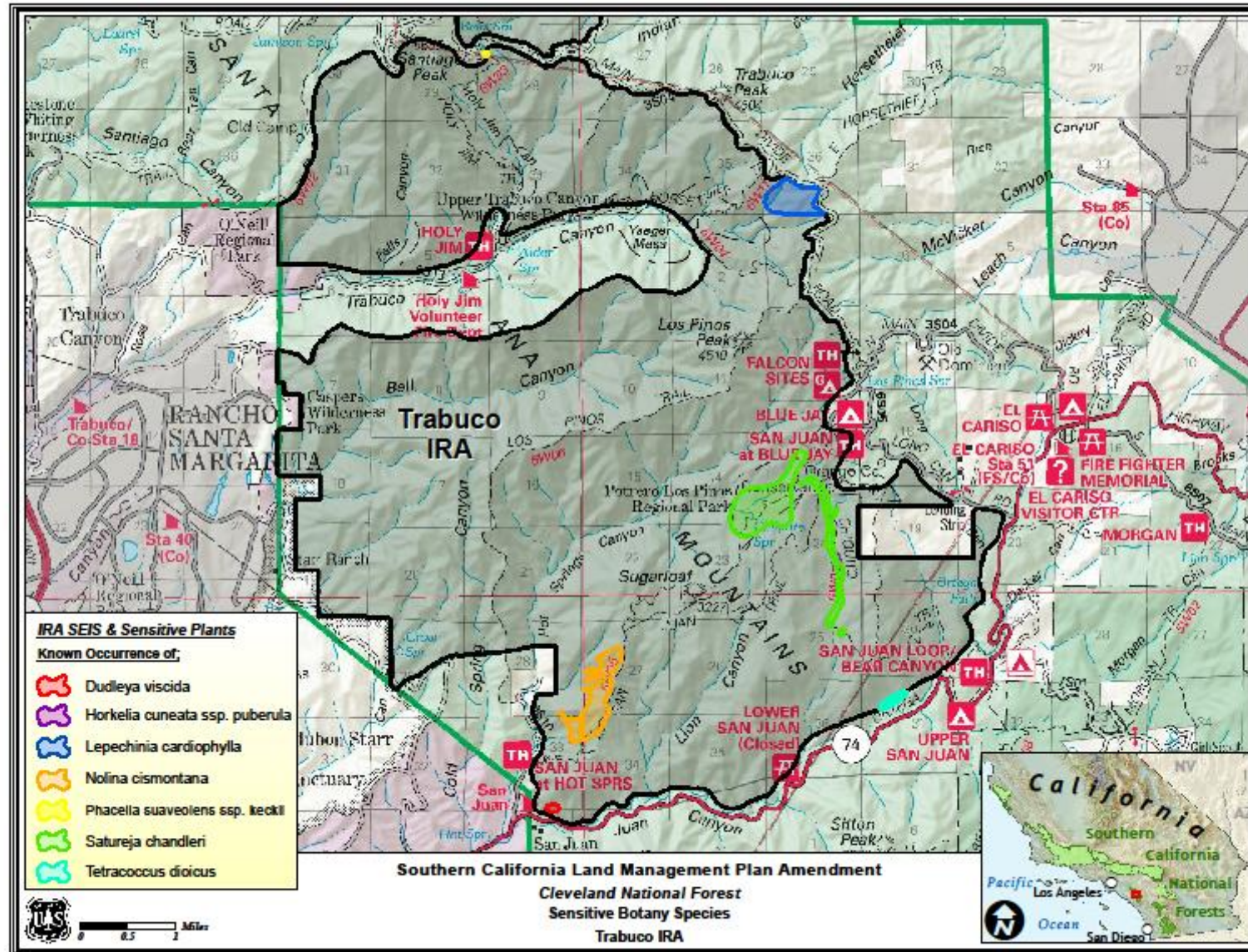


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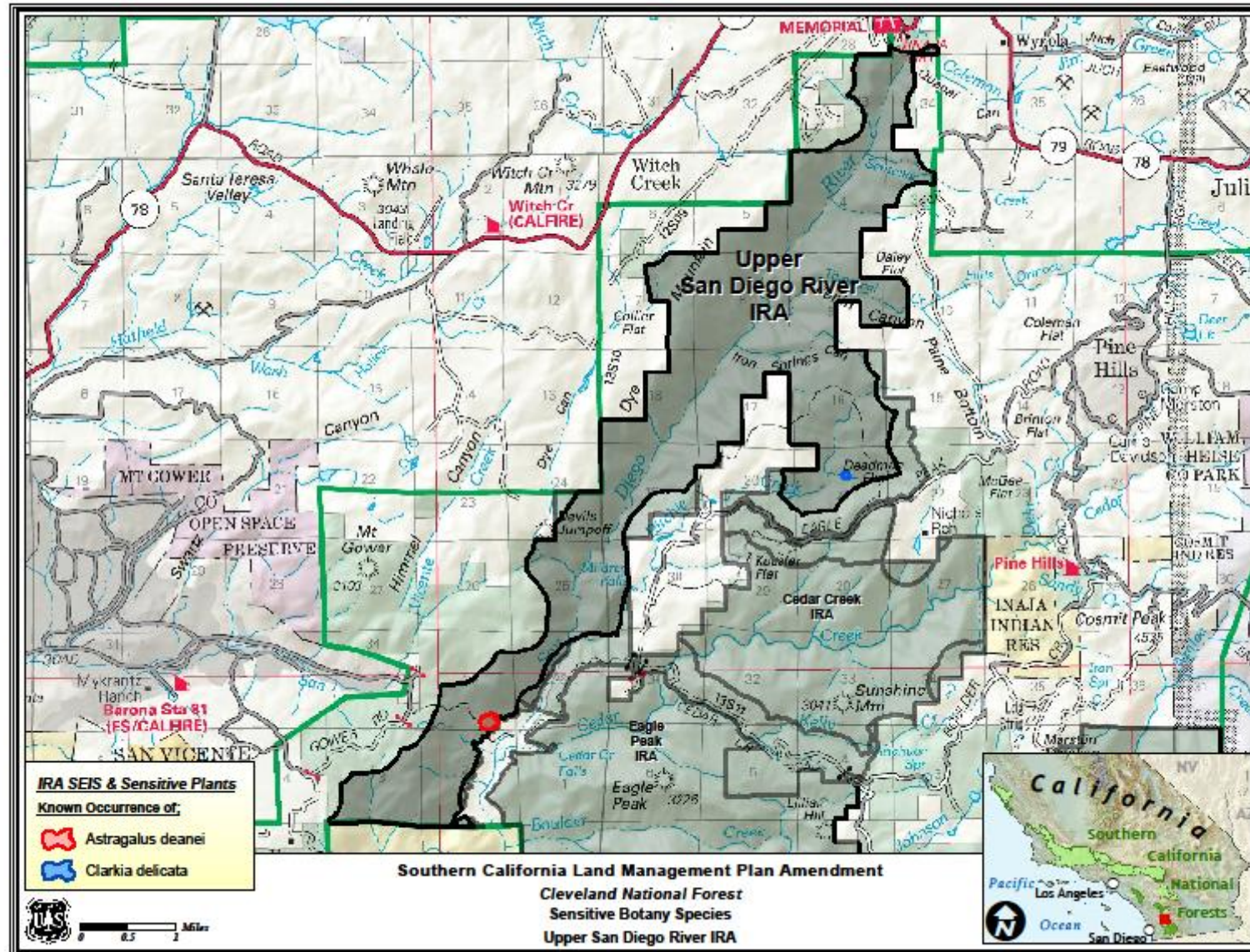


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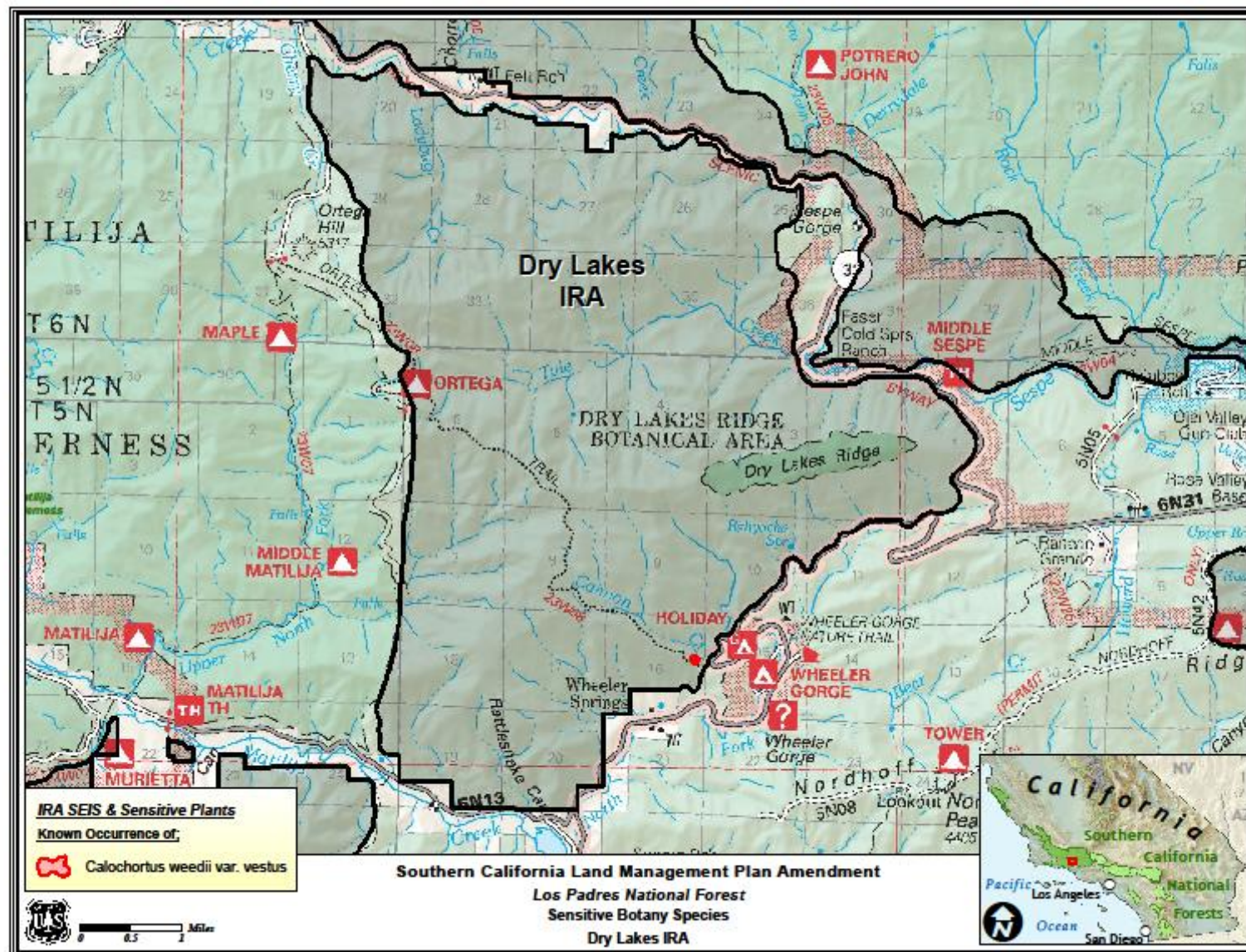


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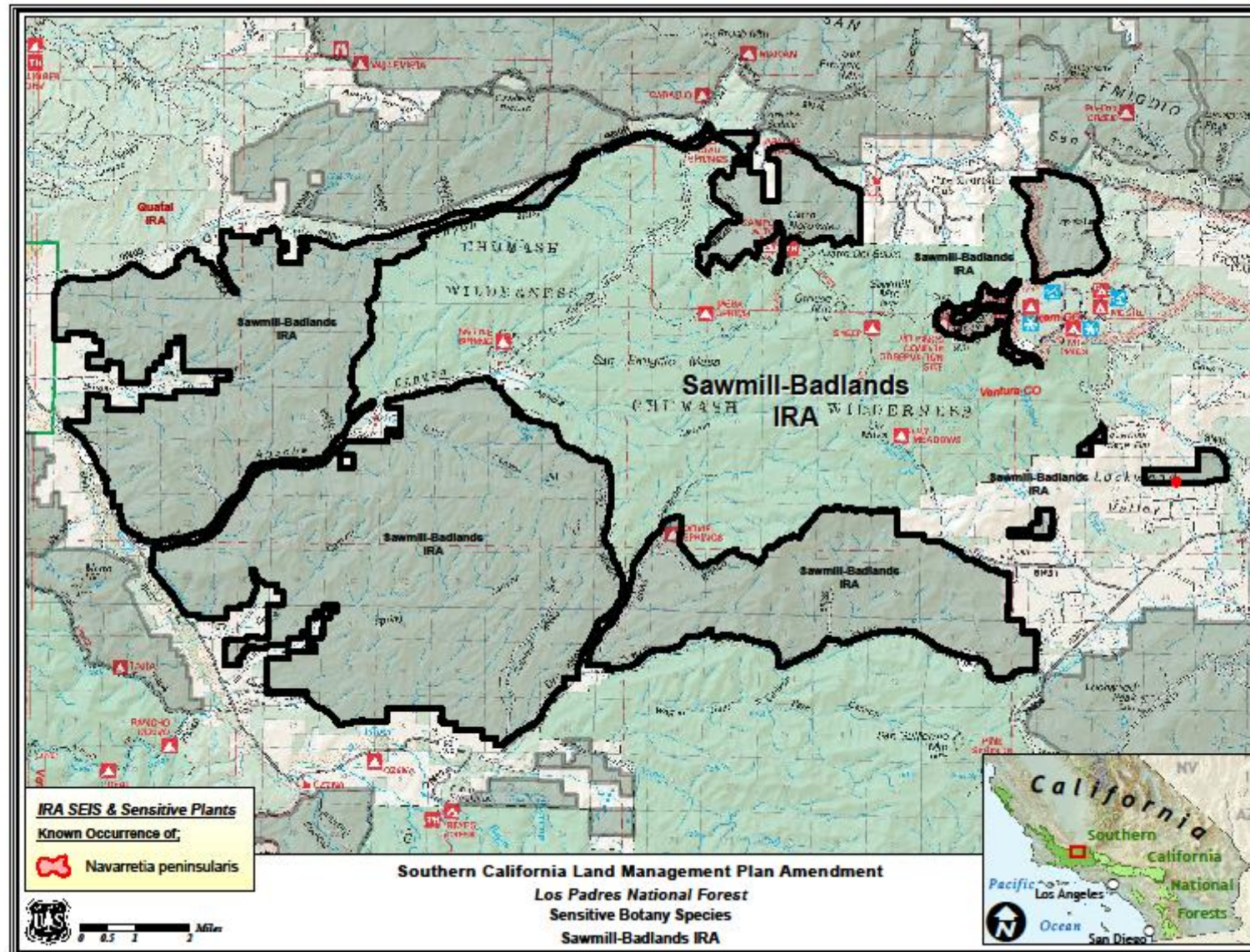


## APPENDIX B: MAP PACKET



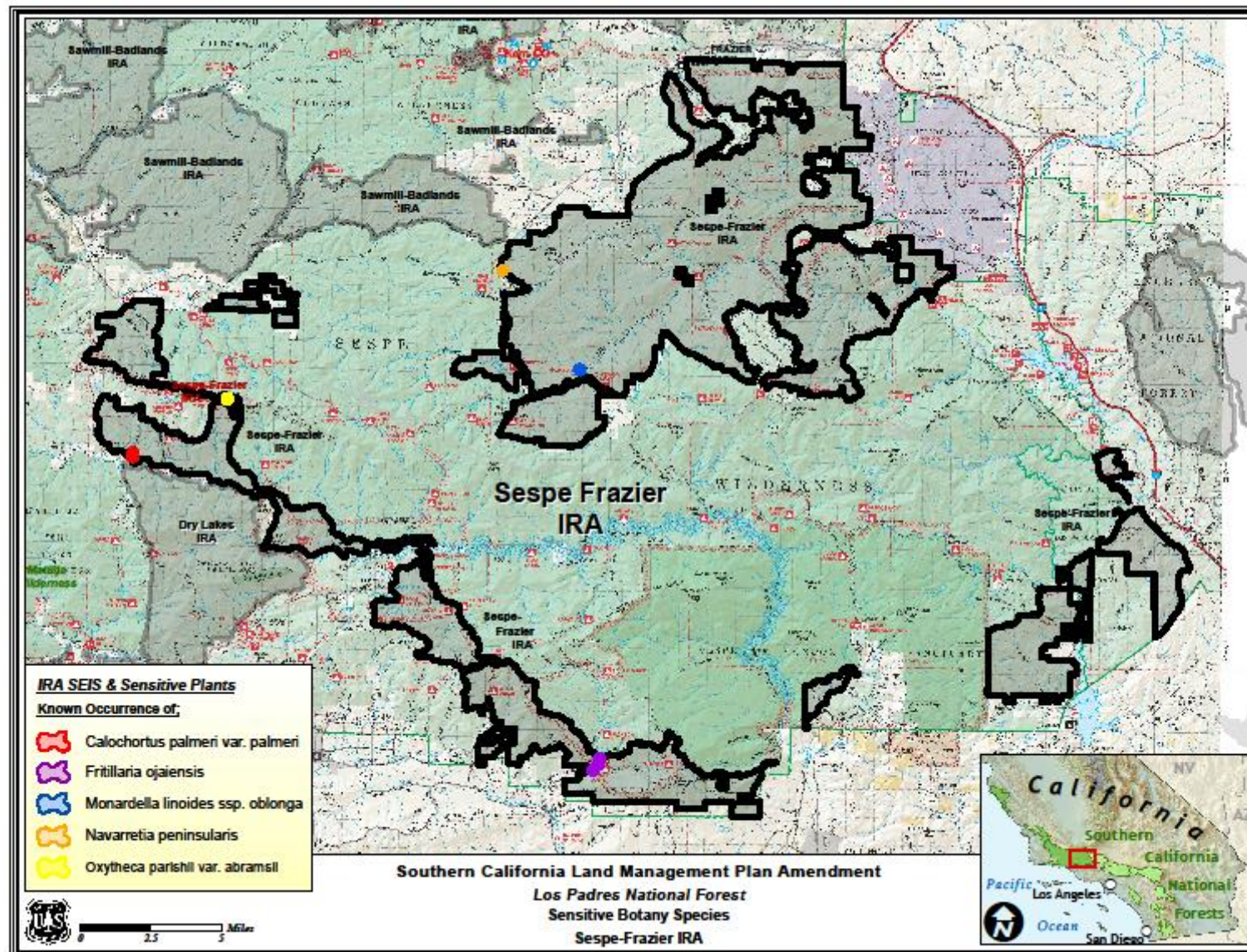


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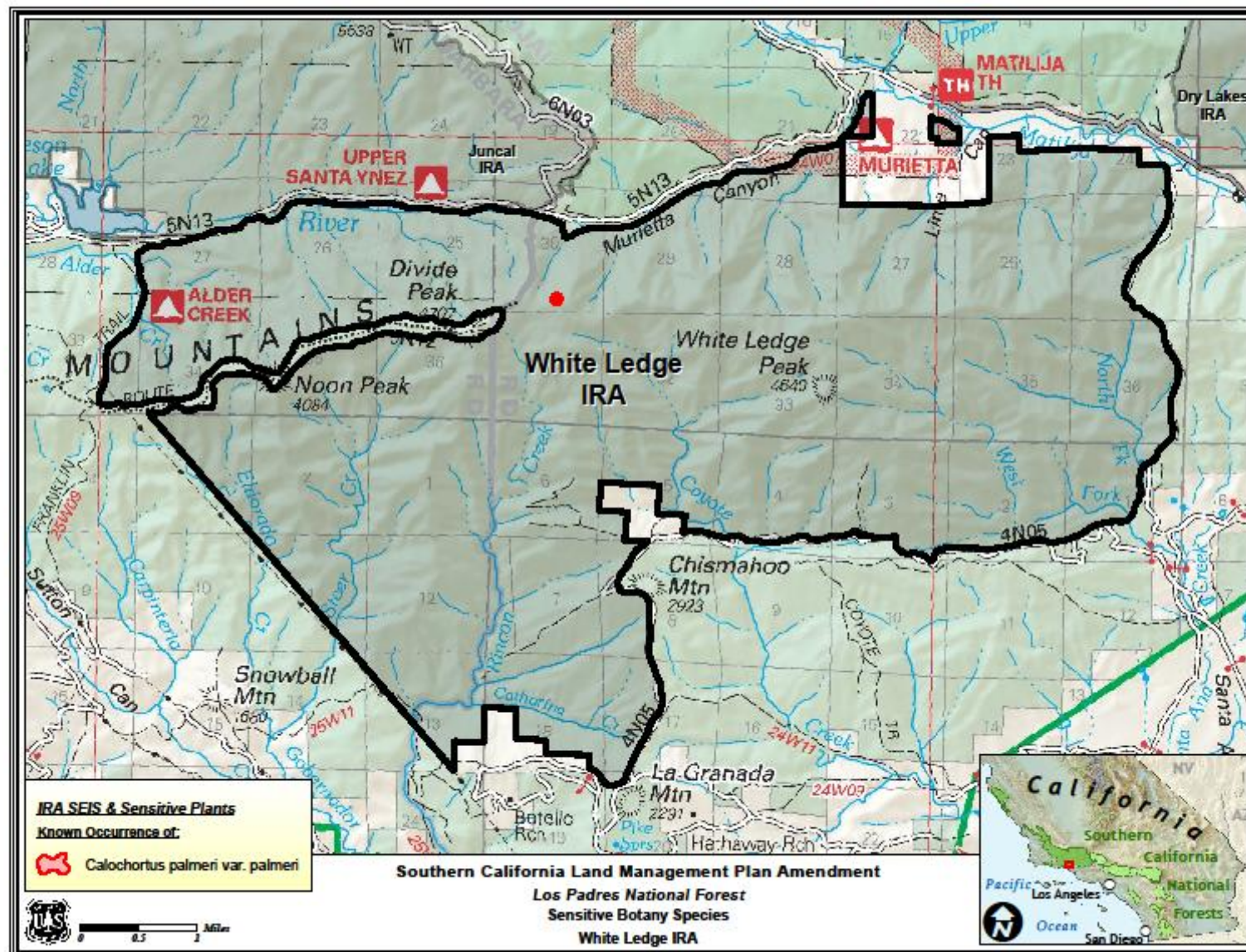


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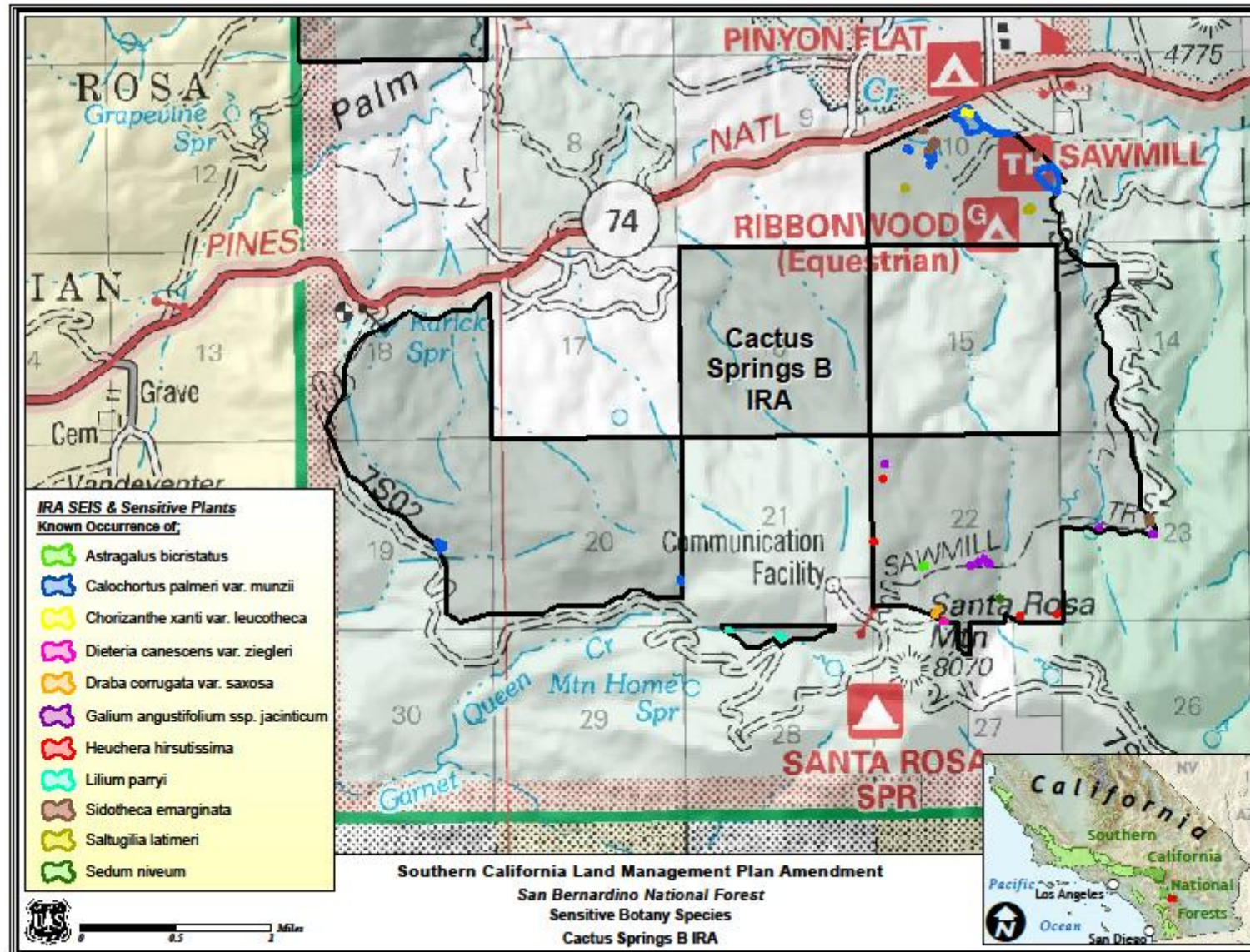


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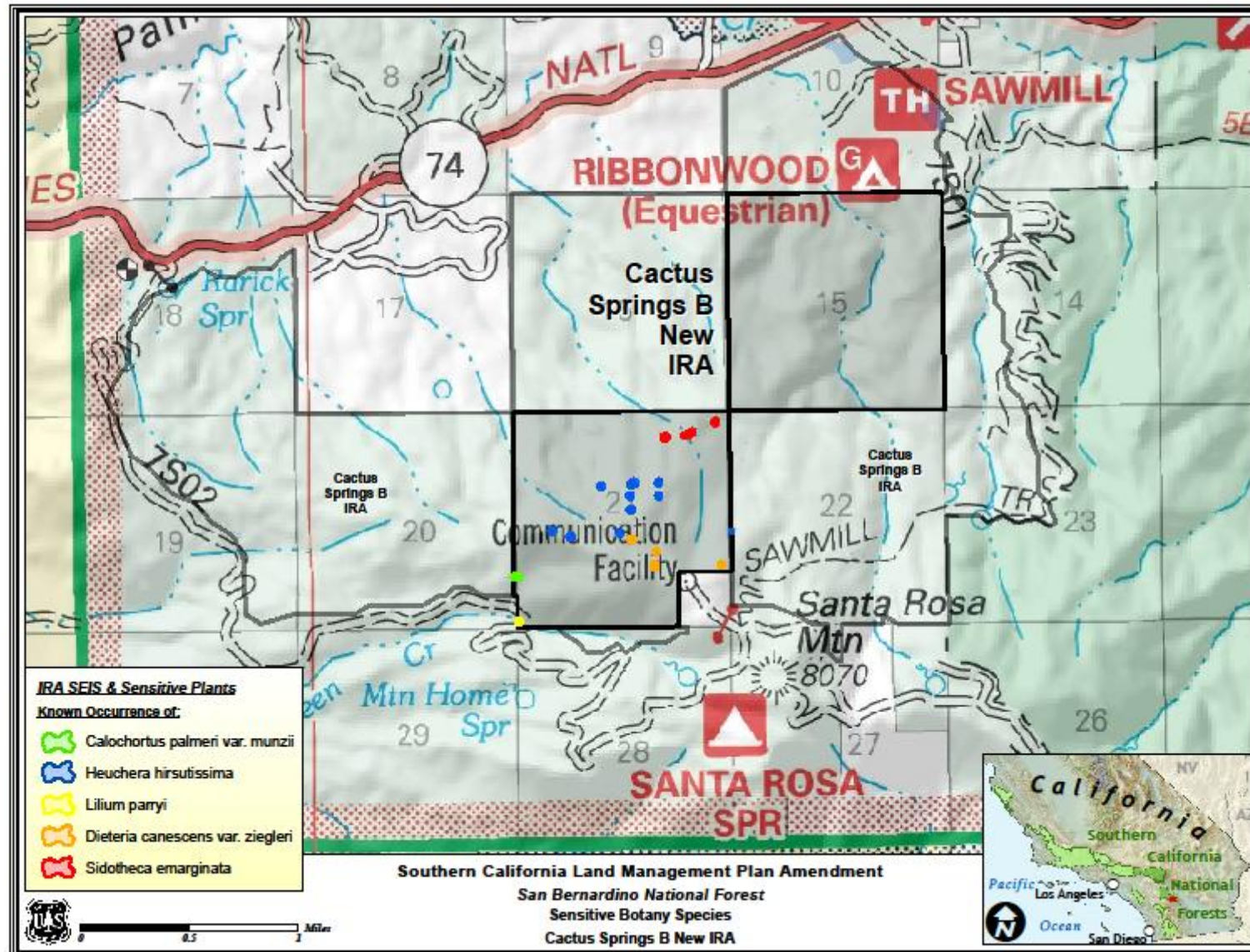


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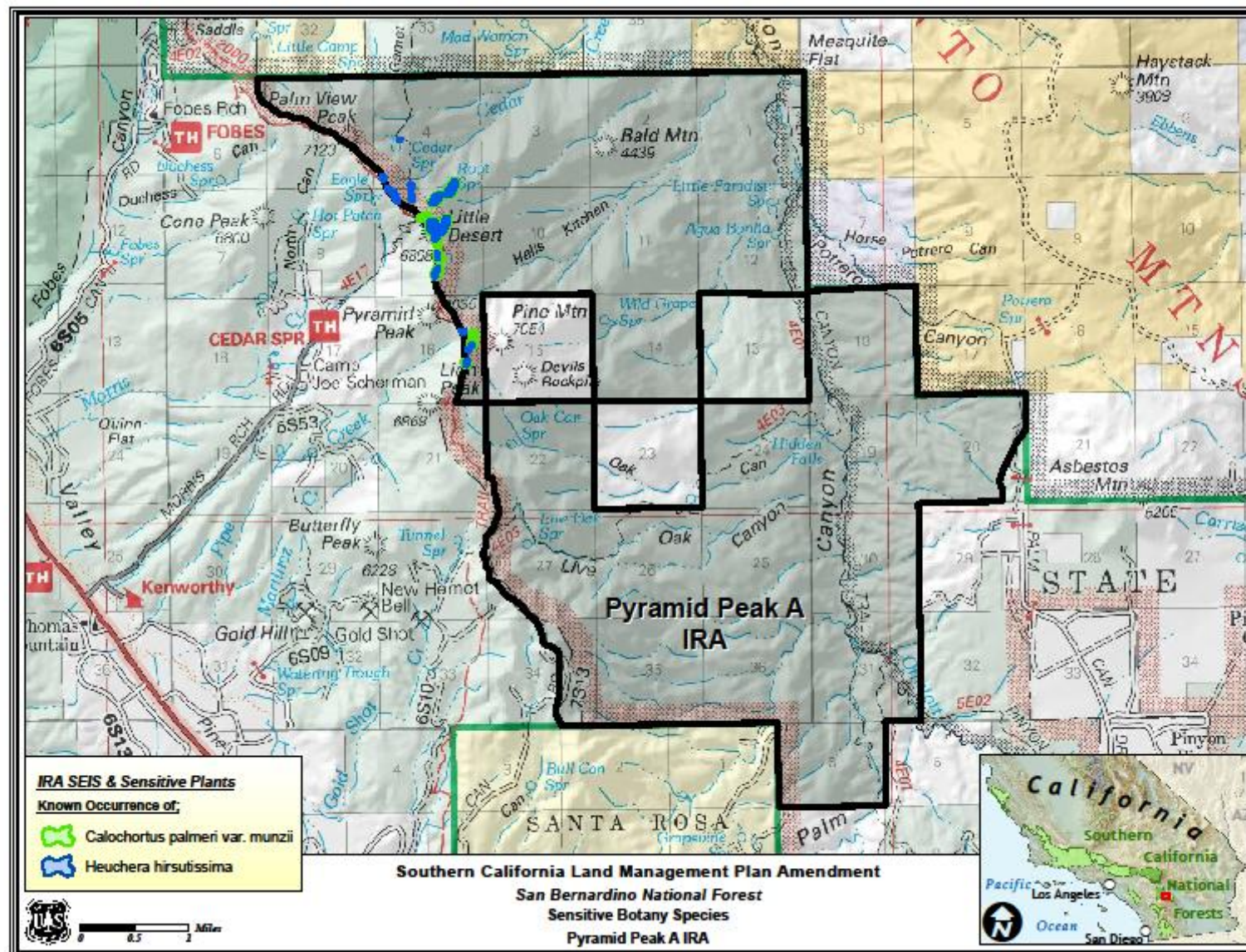


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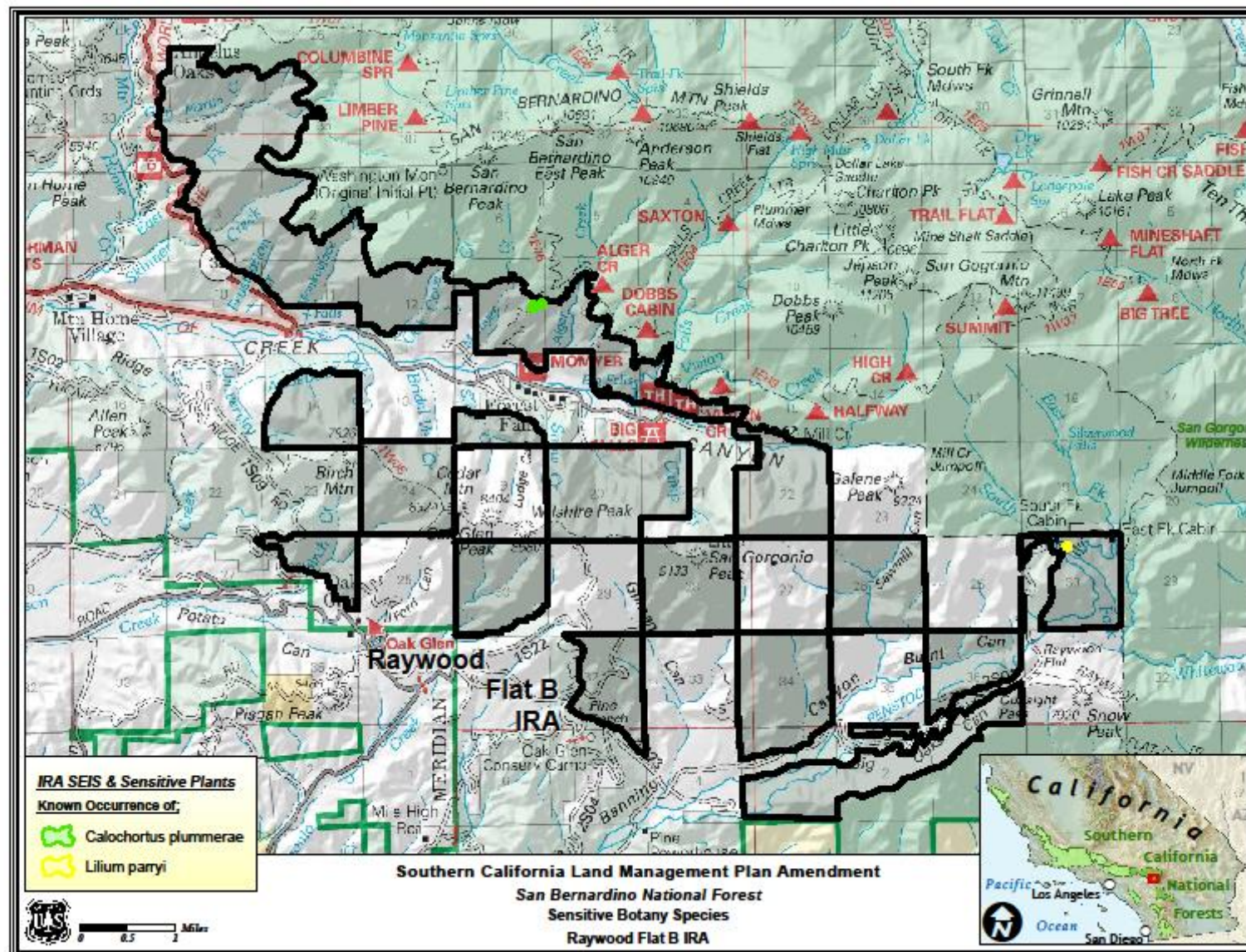


## APPENDIX B: MAP PACKET





## APPENDIX B: MAP PACKET



## **APPENDIX C: SPECIES ACCOUNTS**

The Species Accounts are located on the **Draft Supplemental Environmental Impact Statement (SEIS), Southern California National Forests Land Management Plan (LMP) Amendment** website in the **Supporting** section under **Project Documents**.

They are titled **Southern California National Forests Species Accounts-Plants**.